

Government response to the Natural Resources Commission recommendations for the Castlereagh Unregulated River Water Sharing Plan

This document outlines how the department has responded to the independent review of the *Water Sharing Plan for the Castlereagh Unregulated River Water Sources 2011* under S43A of the *Water Management Act 2000*.

Water sharing plans (plans) are statutory instruments under the *Water Management Act 2000* (the WM Act). They prescribe how water is managed to support sustainable environmental, social, cultural and economic outcomes. They intend to provide certainty regarding rules for water sharing for water users over the life of the plan, which is typically 10 years unless it is extended.

The *Water Sharing Plan for the Castlereagh Unregulated River Water Sources 2011* (the initial plan) was due to expire 30 June 2022.

The Natural Resources Commission (NRC) has a role under Section 43A of the WM Act to review plans within five years of expiry and report to the minister on:

- the extent that the plan's water sharing provisions have materially contributed to the achievement of, or failure to achieve, environmental, social and economic outcomes
- if changes to plan provisions are warranted.

The [final review report](#) is available on the [NRCs website](#).

The NRC may recommend extending or replacing the plans depending on its review findings. In this instance the NRC recommended replacing the plan by no later than 30 June 2024.

The recommendations and suggested actions arising from the NRC review and how the NSW Department of Climate Change, Energy, the Environment and Water (the department) have responded are listed below.

NRC Recommendations

Recommendation 1

The plan should be:

- a. extended for up to two years until 30 June 2024, to allow time to complete data collection and analysis
- b. replaced by 1 July 2024, supported by the completion of the recommendations of this review.

Department response to 2022 review

The replacement plan is scheduled to commence on 1 July 2024.

Action taken to address NRC recommendation

Replacement plan, the *Water Sharing Plan for the Castlereagh Unregulated River Water Sources 2024*, made under section 50 of the *Water Management Act 2000* and commenced on 1 July 2024.

Recommendation 2

In the plan remake, to improve protection of the water sources and their ecosystems, as well as provide certainty and transparency for users, DPE-Water¹ should:

- a. determine a sustainable numeric LTAAEL [long term average annual extraction limit] that considers:
 - i. impacts from extractions in the adjacent *Water Sharing Plan for the Macquarie-Castlereagh Groundwater Sources Order 2020* and *Water Sharing Plan for the Barwon-Darling Unregulated River Water Source 2012*
 - ii. best available information, including climate change projections, long-term climate data sets, updated and improved models, and contemporary observations of stream flows and water access during the most recent drought (2017 to 2019)

¹ Note: All references to the Department of Planning Industry and Environment – Water, DPIE-Water, the Department of Planning and Environment or DPE - Water refer to the NSW government Water Group, which is currently known as the Department of Climate Change, Energy, the Environment and Water – Water Group (DCCEEW - Water).

- iii. up-to-date estimates of basic landholder rights and accounts for estimated growth in domestic and stock use
- b. accurately estimate historic extraction to allow calculation of up-to-date numeric LTAAELs
- c. prepare estimates of current extraction based on reasonable estimates of all forms of take (noting it is unrealistic to expect all water users will be metered) and assess the potential that extraction has increased above the LTAAEL
- d. incorporate provisions that require the minister to consider setting the AWD to the ratio of the numeric LTAAEL to the entitlement, if LTAAEL compliance using evidence of actual annual take during the water year is not undertaken
- e. include provisions to clearly specify the relative AWD reductions for the special additional high flow access licences
- f. engage with licence holders early in the remake process to ensure the risk of reduced AWDs is transparent and to understand potential impacts to users so that environmentally protective AWDs are set in a manner that minimises impacts on licence holders.

Department response to 2022 review

- a. Partially agree. The Murray Darling Basin Plan (the Basin Plan) sets an environmentally Sustainable Diversion Limit (SDL) for each water resource plan area. NSW Water Resource Plans (WRPs) demonstrate that the SDL has been complied with and, where it has not, what action must occur to ensure extraction is reduced below the SDL. This is a requirement of the Basin Plan. Any review of extraction limits would need to be undertaken within the framework of the Basin Plan and would likely coincide with a review of sustainable diversion limits for the Macquarie Castlereagh Water Resource Plan (WRP).
- b. Partially agree. The 2011 LTAAEL was based on the best available information at the time the plan was developed. Reviewing the information used to calculate the LTAAEL for inland unregulated water sharing plans (plans) would require agreement that the work is a priority and can be resourced. As noted above any changes to the LTAAEL would need to be negotiated with the Commonwealth Government as it would have implications for the Basin Plan.
- c. Partially agree. The department acknowledges that LTAAEL assessments have not been undertaken for the plan area to date due to a lack of metered extraction information which has presented significant challenges. As part of the development of implementation programs for the unregulated water sharing plans, the department will consider methods for assessing compliance with extraction limits, including developing procedures. The implementation of the 2018 Metering regulations will significantly improve the

department's unregulated LTAAEL and compliance regime. The Basin Plan requires NSW to undertake annual SDL reporting for all SDL resources units. The Murray Darling Basin Authority (MDBA) will provide transparent and timely accounts of all water take in the Basin through the establishment, maintenance, and publication of the Register of Take. MDBA will report the status of SDL compliance in its annual water take reports. The coastal sustainable extraction limit project is reviewing extraction limits in unregulated and alluvial systems along the coast. The methods and outcomes of the project will be reviewed and where appropriate applied in the inland unregulated systems, in conjunction with any Basin Plan related changes.

- d. Disagree. It would be inappropriate to include provisions that fetter the minister's discretion. The 2011 plan specifies what compliance action is to occur when extraction exceeds the plan limit, which is reducing Available Water Determinations (AWDs) for lower priority users (i.e., unregulated and/or high flow licence categories). However, the amount of the reduction is not specified in the plan as it varies depending on the amount of exceedance, the licence category driving the growth, and results from hydrologic analysis which are peer reviewed. On this basis alone it would be inappropriate to specify set figures for AWD reductions. It should also be noted that setting AWDs based on the LTAAEL to entitlement ratio would impact more active users, potentially forcing them to immediately enter the market to secure additional water. This would cause unnecessary financial impacts to some licences holders without any evidence to suggest the plan limit has been exceeded. Updating share components in the plan is a standard part of the replacement process. The data is taken from the access licence register which is the source of licencing information.
- e. Disagree. See above.
- f. Partially agree. LTAAEL compliance assessments are required to be undertaken annually, they are not undertaken as part of plan replacement. Consultation regarding non-compliance with the LTAAEL would take place with licence holders where it has been determined that extraction has exceeded LTAAEL. This is not done as part of the plan replacement process.

Action taken to address NRC recommendation

- a. The department has included a provision in the plan for publication of numeric LTAAELs. Based on this information the Department may amend the plan to include the numeric LTAAEL. Additionally, this numeric LTAAEL must be further considered to determine a sustainable level of take (required considerations set out in the plan).

Input from the NRC will be sought in relation to review of adequacy of calculations and method application for this work.

- c. Additionally, the department will consider the outcomes of a current work program informing maintenance of water supply in inland regulated river systems. This is a key piece of work in relation to climate considerations within plans. The department is undertaking two pilot unregulated LTAAEL compliance assessments in the Lachlan and Richmond catchments. The method uses the best available information, including remote sensing data, and will be reviewed to include metering data when available. Pending the outcomes of the pilots, the method will be applied to other unregulated water sources. The department has consulted with the NRC on the project plan and intends to consult further on the pilot results, when complete.

Recommendation 3

In the plan remake, to clarify how floodplain harvesting in the plan area that intersects with the Barwon-Darling River designated floodplain is managed and improve the accuracy and transparency of the management of floodplain harvesting, DPE-Water should:

- a. revise the Plan to clearly specify that it excludes floodplain harvesting licensed within the *Water Sharing Plan for the Barwon-Darling Unregulated River Water Source 2012*, if that is how DPE-Water intends to manage floodplain harvesting
- b. ensure any floodplain harvesting extraction excluded from the Plan area is accurately accounted for in the *Water Sharing Plan for the Barwon-Darling Unregulated River Water Source 2012* when assessing the LTAAELs
- c. ensure the actual location of floodplain harvesting extraction is used when assessing if the level of extraction is sustainable and the risks of extraction are acceptable.
- d. create a separate management zone for the portion of the Castlereagh Below Coonamble Water Source that is in the Barwon-Darling River Floodplain to assist with (b) and (c).

Department response to 2022 review

Disagree. The plan does not need to specifically exclude the Floodplain Harvesting (FPH) licensing within the plan area. This is done by the Floodplain Harvesting Policy which is implemented based on the presence of eligible works within a designated floodplain. There is no designated floodplain in the Castlereagh Unregulated plan area. Any FPH occurring in the plan area that overlays the designated Barwon Darling floodplain would be managed under the Barwon Darling plan.

The take of overland flow under an unregulated river access licence in this area would be accounted for in the remade water sharing plan.

Action taken to address NRC recommendation

No action required.

Recommendation 4

In the plan remake, to reduce pressure on low flows in the Castlereagh Above Binnaway Water Source and address risks from climate change, DPE-Water should investigate creating a high flow licence category and allow trade into high flows where there is a low risk to high flow dependent environmental values.

Department response to review

Partially agree. The department will review access rules in water sources where low flows are at risk. However due to the nature of the Castlereagh system, consisting of extensive in-river sand beds, protection of low flows will be difficult as it naturally has little to no surface water flows for long periods. This would require significant changes to access rules resulting in severe economic impacts.

A review of current dealing rules will be undertaken as part of plan remake to improve flexibility for water users by increasing opportunities for trading. It should be noted that current unregulated licence holders can extract during high flows. As conversion factors are not permitted in the plan, there is no real incentive for licences holders to convert to a high flow licence. Allowing people to move from low flow extraction into high flow extraction is unlikely to enhance economic opportunities as access will be far less reliable and capital investment to build on farm storages may not be feasible.

Action taken to address NRC recommendation

Creating a high flow licence was not supported. Conversion factors, typically used to encourage water users to move to a high flow licence category, are not possible because as this would result in additional take, and take is limited by the provisions of the Basin Plan. Without the conversation factors, there would be no incentive for licence holders to convert to a high flow access licence, if created, as access would be far less reliable and additional infrastructure

(larger pumps and on farm storages) would be needed to capture and store high flows for use in drier, low flow, times.

A review of current dealing rules was undertaken as part of the plan remake to improve flexibility for water users by increasing opportunities for trading and for potential environmental benefits by reducing hydrological stress. A number of changes were made in the 2024 plan to:

- permit trade into and between some of the management zones in the Castlereagh River above Binnaway water source
- permit 'no net gain' trade in Castlereagh River below Coonamble Water Source, and
- permit limited trade into Nedgera Creek, Teridgerie Creek and Tooraweenah to Coonamble Tributaries Water Sources.

Recommendation 5

In the plan remake, to improve environmental outcomes, DPE-Water should:

- a. ensure the plan reflects the latest information on environmental water requirements from the Macquarie-Castlereagh Long Term Water Plan and associated fish and flows advice from DPI-Fisheries
- b. review the flow classes for the Castlereagh Above Binnaway Water Source based on best available information regarding environmental flow requirements and suitable flow reference points, then incorporate and implement as part of the replacement Plan
- c. for the Castlereagh River Below Coonamble Water Source, investigate options to better protect low flows and first flush following cease to flow periods; establish a management zone for the lower floodplain to manage overflows from the Barwon-Darling River and ensure that when protected from extraction in the Barwon-Darling they are not extracted by Castlereagh licence holders
- d. determine the contribution of flows from the unregulated Castlereagh River to the Barwon-Darling and include relevant flow targets in the replacement plan
- e. work with DPE-E&H² and DPI-Fisheries to identify regionally significant wetlands, assess the risks to these sites and the adequacy of current rules in protecting environmental values from extraction

² Note: All references to the Department of Planning, Industry and Environment - Environment, Energy and Science, DPIE EES, the Department of Planning and Environment - Environment and Heritage Group or DPE EHG are referring to the NSW government Environment Group, which is currently known as DCCEW Biodiversity, Conservation and Science Group.

- f. retain current pool protection rules in the remade plan and remove Schedule 2A and the amendment provision to mitigate the risk of an erosion of environmental protections, including planned environmental water.

Department response to 2022 review

- a. and b. Partially agree. New information will be considered when reviewing the water sharing arrangements and environmental water requirements (EWRs) will be an important part of the options development stage, where appropriate. The department has processes in place to incorporate new scientific information into plan replacements including collaboration with NSW Fisheries as part of the development of the High Ecological Value Aquatic Ecosystem (HEVAE) and Risk Assessment for the plan areas.

Review of Cease to Pump (CtP) thresholds considers a range of scientific information including EWRs described in the Long Term Water Plan (LTWP), where appropriate. However, LTWPs aren't designed to develop water sharing rules, they are required under the Basin Plan to implement the Basin Watering strategy. They prioritise ecological assets and include targets which inform the management of water across the Basin, particularly for watering with environmental water 'held' by NSW and Commonwealth environmental water managers. In many cases it is not appropriate to align access rules in unregulated water sources with EWRs as they are not achievable under 'baseline' conditions.

There would likely be significant impacts on licence holders in unregulated systems where water has not been recovered and cannot be managed to achieve EWR targets. Often EWRs are either absent or defined in a manner that is not measurable in these areas. It is also difficult to align CtP rules with EWRs in unregulated systems as there is generally limited gauging and a lack of flow information. DCCEEW-Water will continue to work closely with DPI Fisheries and DCCEEW-Biodiversity, Conservation and Science (BCS) to develop access rules to improve environmental outcomes where required.

- c. Partially agree. Access rules for the water sources in the Castlereagh plan will be reviewed as part of the replacement process. The current NSW Government policy is that Planned Environmental Water (PEW) is re-regulated when it flows into a different water source. This recommendation would require a significant policy change.
- d. Partially agree. There is an extensive suite of work underway across the department towards better understanding water flow, access and connectivity including in the Barwon Darling. The outcomes of this work may inform future work to revise the rules in various plans. It should be noted that achieving flow targets in the Barwon Darling is best achieved by restricting access to supplementary water in upstream regulated systems. Access to

supplementary announcements is at the minister's discretion and a number of factors are considered before an announcement is made (including the triggers in the plan).

- e. Agree. The department will continue to work with DCCEEW-BCS and DPI Fisheries to identify regionally significant assets including wetlands at risk, to improve environmental outcomes. It should be noted that the 2011 plan includes rules that protect wetlands and off-river pools from being drawn down.
- f. Agree. The draw-down rules for off-river pools that were established at the commencement of the plan are likely to be retained. During the replacement process consideration will be given to whether Schedule 2A is required in the new plan.

Action taken to address NRC recommendation

- a. and b. New information was considered when reviewing the water sharing arrangements and environmental water requirements. Access rules for the Castlereagh River above Binnaway Water Source were investigated including the suitability of stream flow gauges and cease to pump (CtP) options of different flow classes. The CtP rule in the 2011 plan of no visible flow rule has been replaced with gauge-based access rules in the replacement plan. Access rules for Management Zone (MZ) 1 have been set at 1 ML/day using the Castlereagh River at Coonabarabran #3 as a reference point. Access rules for MZs 2-5 have been set at 1 ML/day using the Castlereagh River at Hidden Valley as a reference point. For MZ 6 (Independent Tributaries) the existing cease to pump of no visible flow is retained. The CtPs in the replacement plan provide a balance between the protection of low flows, basic landholder rights and town water supply and the needs of existing licenced water users.
- c. Access rules for the Castlereagh River below Coonamble Water Source were investigated. No change to the current access rule of cease to pump when no visible flow rule is proposed given that stream flows are naturally very intermittent, instream values are low, and the total unregulated entitlement is relatively minor. Conditions on unregulated river (special additional high flow) licences are no longer fit for purpose licences due to infrastructure (gauge) changes. WaterNSW undertook modelling to determine an equivalent access rule. A new access rule of commence to pump when flows are greater than 1130 ML/d at the Castlereagh River at Gungahman gauge now applies to (special additional high flow) licences.
- d. There is an extensive suite of work underway across the department towards better understanding water flow, access and connectivity including in the Barwon Darling and its tributaries.

- e. New rules to better protect significant wetlands are included in the replacement Plan that prohibit new water supply works within, and 3km upstream of, internationally significant (Ramsar) wetlands and within regionally significant wetlands. This rule will not apply to replacement water supply works. Trade into these wetlands is also prohibited. Trade within these wetlands will be allowed between licences/works within the same significant wetland.
- f. Existing access rules for pools were reviewed. Access rules for in-river pools and off-river pools now apply to all water sources with the exception of Castlereagh River Binnaway to Gilgandra Management Zone and Castlereagh River Gilgandra to Coonamble Water Source where the rule is impractical as extraction is permitted when there is no visible flow.

Recommendation 6

In the Plan remake, to codify environmental releases from Timor Dam into the plan to support environmental outcomes, DPE-Water should:

- a. use best available information to determine a suitable, outcomes-focused environmental flow regime and associated infrastructure upgrades to deliver environmental flows from Timor Dam and include these rules in the plan
- b. establish the operating rules (including environmental release and domestic and stock requirements) in the Plan for application as mandatory conditions to the water supply works approval and ensure that these conditions are enforceable and compliant. Include requirements for quantitative measurement and records if this is required to assess compliance with operating rules.
- c. review the gauging network and ensure there is accurate monitoring of inflows and outflows from Timor Dam and include appropriate flow reference points in the Plan.

Department response to 2022 review

- a. and b. Disagree. Assessing town water supply dams and weirs for their ability to deliver environmental flows is not undertaken as part of a water sharing plan remake process. See Recommendation 10 for more details.

The department recently completed a review of our hydrometric networks in the Murray-Darling Basin, in collaboration with WaterNSW. The review assesses our hydrometric networks within the joint agencies area of operation and responsibility, as well as considering the interests of water

stakeholders. This work fulfils requirements under the Murray–Darling Basin Compliance Compact, 2018.

A Hydrometric Improvement Plan was developed and together with the Commonwealth, we have secured funding to install new equipment and sites. This will update our extensive hydrometric network and make it more robust. Gauges where available, will be considered when reviewing access rules. Two new gauges sites have been identified for the Castlereagh valley; Castlereagh River at Coonamble and Castlereagh Between Gilgandra and Gungahlin gauges as a priority as part of the Murray–Darling Basin Enhanced Water Monitoring and Information (EWMI) program.

Action taken to address NRC recommendation

The department's Metering and Licencing Teams are leading conversations with Council on licencing of Timor Dam. Water Utilities Branch is working closely with Council on strategic planning with regards to 12 key outcomes under the Regulatory and Assurance Framework, of which water security is one key outcome. Water Utilities Branch will continue to work collaboratively with Metering and Licencing and with Council to facilitate conversations around Town water supply requirements.

Recommendation 7

In the plan remake, to improve the management of groundwater-dependent ecosystems (GDEs), DPE-Water should:

- a. clarify the extent to which GDEs in the Castlereagh Alluvium are impacted by licensed users from the Plan (including spearpoints extracting water from river sand beds) and ensure plan provisions (implemented via mandatory conditions on approvals and/or licences) provide adequate protection for GDEs.
- b. ensure the requirements in the Water Sharing Plan for the Macquarie Castlereagh Groundwater Sources 2020 are reflected in the Plan remake, including listing GDEs in the Schedule and map and should specify the level of protection required for GDEs.

Department response to 2022 review

- a. Partially agree. Access rules to manage spearpoint extraction will be reviewed to ensure any impacts to GDEs are minimal. Rules protecting GDEs from groundwater take are now covered in groundwater plans. The *Water Sharing Plan for the Macquarie-Castlereagh Groundwater Sources 2020* includes updated schedules and maps of GDEs plus distance

restrictions for new or amended works. All rules governing take of groundwater are covered in the groundwater plan and are not required in the surface water plan. High priority groundwater dependent vegetation ecosystems have been identified and mapped based on the latest available information and method. This takes account of the probability of groundwater dependence and the ecological value of the GDE. See <https://water.dpie.nsw.gov.au/our-work/science-data-and-modelling/groundwater-management-and-science/groundwater-and-the-environment> for more information on how the department identifies high-priority GDEs.

- b. Disagree. Rules to manage GDEs are listed in groundwater plans and should not be included in surface water plans.

Action taken to address NRC recommendation

- a. The department investigated the potential impact of spearpoint extraction, current management of this extraction and plan rule change options to ensure take does not impact on GDEs. There is now a mandatory condition which sets an 8m depth limit for new, existing and replacement water supply works in the Castlereagh River Binnaway to Gilgandra Management Zone and Castlereagh River Gilgandra to Coonamble Water Source accessing water from the unconsolidated sediments below the riverbed. In addition, new water supply works must stop pumping when there is no visible flow or when in-river pools are less than full capacity.

Recommendation 8

In the plan remake, to improve the management of spearpoints and surface-groundwater connectivity, DPE-Water should:

- a. update Clause 4(3) of the plan to recognise that the plan's water sources also consist of water in riverbed sediments. The Plan should clearly delineate the maximum depth of riverbed sediments the plan applies to. The relevant groundwater plans should also be clear that they exclude water in riverbed sediments that are covered by the plan.
- b. prioritise the installation of shallow piezometers between Gilgandra and Coonamble and update access rules (under clause 46(6)) to link access via spearpoints with piezometer measurements.
- c. improve consistency between access rules for alluvial groundwater bores regulated by the *Water Sharing Plan for the Macquarie-Castlereagh Groundwater Sources 2020* and

spearpoints covered by the plan, by adopting linked access rules and rostering. This should include adopting consistent restrictions for spearpoints to shallow groundwater bores and investigating extending the spatial extent of the water sources covered by the groundwater plan.

Department response to 2022 review

- a. Agree. The department will review Clause 4 to ensure it clearly defines the water managed by the replacement plan including water which is taken by spearpoint extraction. Any changes required to the relevant groundwater plan will also be identified and included on the amendment register.
- b. Disagree. Bores with monitoring equipment could not practically be installed within the river bed sands; bores would need to be installed on the floodplain adjacent to the river and the hydraulic link between the floodplain upper sediments of clay/silts/fine sands would not necessarily be sufficient with the river bed sands to be indicative of the responses in the sands; any monitoring data would be only relevant to the point being monitored and would not necessarily inform conditions in another river reach.
- c. Disagree. The department does not support applying access rules (rostering) for spearpoints to access licences in the less highly connected Castlereagh Alluvial Groundwater Source. Plan rules reflect the characteristics of the water sources and the risks to those water sources and associated ecosystems from the groundwater extraction. It would be inappropriate to manage less highly connected alluvial sediments in the same way as the highly connected riverbed sands. Instead, risks are managed by limiting new works within 40m of the river and any new work outside that distance is assessed for potential environmental impacts as per the published assessment criteria. It should be noted that there is a total of 583 shares in the groundwater source.

Action taken to address NRC recommendation

- a. Changes to Part 1(3) of the replacement plan (water sources to which the plan applies), include water contained in unconsolidated sediments on or below the surface of the ground within the bed and the top of the high banks of rivers (unconsolidated sediments water) that is not surface water in the Castlereagh River Binnaway to Gilgandra Management Zone (Binnaway to Gilgandra Water Source) and Castlereagh River Gilgandra to Coonamble Water Source. The relevant groundwater plans have also been

amended to exclude water now defined in the replacement plan for the Castlereagh Unregulated water sources.

Recommendation 9

In the plan remake, to better achieve Aboriginal water objectives as stated in the plan, DPE-Water should:

- a. include registered native title claims and Indigenous Land Use Agreements (ILUAs) of the Gomeroi, the Ngemba/Ngiyampaa, Wangaaypuwan and Wayilwan, and the Tubba-Gah peoples, and allow sufficient time to undertake detailed engagement with these Traditional Owners and other Aboriginal knowledge holders to identify cultural values and provisions to protect and support these values
- b. identify and protect known high value cultural sites in the replacement plan and undertake further work with a range of Traditional Owners and knowledge holders to better understand water values and uses, identify the rules to protect them, and support water access and use
- c. update amendment provisions to state that the plan can be amended to protect cultural values based on best available information and any amendments based on new information should occur in a timely manner
- d. ensure that where additional entitlement becomes available, that Aboriginal water needs are assessed and provided for as a priority
- e. undertake state-wide actions identified in the Commission's water sharing plan reviews to improve consideration and respect for native title and Aboriginal values in water sharing plans.

Department response to 2022 review

- a. Agree. The department through the Aboriginal Water Program (AWP) intends to work more closely with NTSCORP (the Native Title representative body for NSW) and Native Title holders.
- b. Agree. The AWP is to develop an online keeping place for knowledge about Aboriginal water dependent cultural sites, where the existing and new information can be held. While this information was not available to be considered during the replacement of this plan, it will be an important piece of information as we replace or amend plans in the future.
- c. Agree. The department is updating its plan templates including the provision for amendments to allow for protection of water-dependent Aboriginal cultural assets.

- d. Agree. The department is currently developing a risk based framework for assessing how unassigned water is managed. The framework would inform how surrendered licences are managed, and if and when controlled allocations orders should be made. Aboriginal access to water rights for cultural and economic needs will be a key factor when assessing how these licences are managed in the future. The NSW Government has agreed in principle to the Inland Water target 15c in Closing the Gap which states that 'by 2031, 3% of national water access entitlement allocated to Aboriginal and Torres Strait Islander Corporations'.
- e. Agree. The Aboriginal Water Strategy engagement will commence in early 2024 and conclude late in 2024. The final strategy will include an implementation plan and state-wide actions.

Action taken to address NRC recommendation

The replacement plan can be amended to reflect the outcome of any pending Native Title claims, once determined.

The pilot Cultural Watering Plan program has commenced which will enable the department to gain a better understanding of the Cultural (and other) watering needs of Aboriginal communities and highlight opportunities and barriers to achieving the desired outcomes. Insights from the pilot will be used to better inform policy and planning decisions to make water more accessible for Aboriginal people.

The Regional Aboriginal Engagement team is dedicated to improving consultation with Aboriginal stakeholders on water management and planning. The team have established 12 Regional Aboriginal Water Committees across NSW. The purpose of the committees is to give greater recognition to Aboriginal water rights and interests, ensuring Aboriginal people can contribute to water management. There are two committees in the far west of the state.

The department has committed to improving information provided to First Nations people about water management and access. Improved information and communication materials fosters informed participation in engagement processes and builds greater awareness of water access mechanisms. This is in line with the principles of free, prior and informed consent as outlined in the department's Indigenous Cultural and Intellectual Property Protocol.

Recommendation 10

In the plan remake, to address risks to water security, DPE-Water should:

- a. in consultation with Warrumbungle Shire Council, the Natural Resources Access Regulator (NRAR) and DPE-Water Utilities, ensure town water supply security is not compromised as part of the review of environmental flows from Timor Dam (see R 6)
- b. assess the adequacy of access rules for licensed users, including spearpoint setback requirements, to ensure protection of town water supply requirements in accordance with the [WM] Act
- c. collaborate with DPE-Water Utilities to reflect the town water supply requirements for Coonamble and Gulargambone and ensure their future town water needs are included in Plan provisions.

Department response to 2022 review

- a. Partially agree. Town Water Supply (TWS) entitlement will not be reviewed as part of plan replacement. The Safe and Secure Water Program is the government's key infrastructure program targeted at addressing priority town water security, water quality and environment (sewerage) risks in regional NSW. Where augmentations are required to address water security issues, that program is available to assist with funding to meet community and regulator requirements, which can include new or enhanced environmental flow conditions where appropriate. The department's regional water utilities teams work closely with Local Water Utilities (LWUs) and other organisations to assist with these discussions and negotiations. The outcomes may include ensuring work is undertaken to upgrade infrastructure or reviewing conditions on the licence.
- b. Partially agree. Access rules will be reviewed where irrigation is having impact on TWS reliability.
- c. See response to a.

Action taken to address NRC recommendation

- a. See action taken for Recommendation 6.
- b. See action taken for Recommendation 5 a.

Recommendation 11

By June 2024, to improve plan-specific MER, DPE-Water should:

- a. expedite the finalisation and publication of DPE-Water's water sharing plan evaluation framework and methods manuals and ensure there is multi-agency support and oversight of their implementation
- b. identify feasible and appropriate resourcing to support ongoing MER activities in line with the NSW Water Strategy
- c. specify timely reporting requirements of the results of MER activities to support transparency, public awareness, adaptive management and to leverage the effectiveness of MER investment
- d. identify and address critical knowledge gaps to support adaptive management
- e. use the recently developed prioritisation framework to prioritise MER activities based on values and risk.

Department response to 2022 review

- a. Agree. The department is currently developing a NSW Water Sharing Plan Evaluation Program that includes;
 - i. Monitoring, Evaluation, Reporting and Improvements (MERI) framework
 - ii. prioritisation tool
 - iii. Evaluation Methods Manuals
 - iv. evaluation and monitoring plans

The department is working with NSW agencies including the NRC to ensure an agreed approach to Water Sharing Plan Monitoring Evaluation and Reporting. Implementation of the framework will commence in 2024 beginning with evaluations for water sharing plans due to reach plan term in 2026/27.
- b. Noted. The implementation of any Monitoring Evaluation and Reporting program is dependent on having a defined, long-term budget. While every effort is being made to maintain a Monitoring Evaluation and Reporting program, the ability to implement aspects in a Monitoring Evaluation and Reporting plan is limited by resources.
- c. to e. Noted, see response above.

Action taken to address NRC recommendation

Implementation of the Monitoring Evaluation and Reporting program will commence in 2024. This will clarify the roles and responsibilities, reporting requirements, governance arrangements and timeframes associated with the program. Social, economic and environmental outcome evaluation methods have been developed and applied to pilot surface

water sharing plans and reviewed by the NRC. Work has now commenced on expanding method statements to include groundwater specific components. NSW also undertook the first benchmarking survey to collect primary data that informs evaluation of social outcomes of Water Sharing Plans. Data was collected from communities and water users across all Water Sharing Plan areas.

The Department, as part of plan provisions, has added a requirement for the minister to prepare a monitoring, evaluation and reporting (MER) plan. The MER plan is to be published by 30 June 2025 and each year the minister is to publicly report on the implementation of the water sharing plan, including progress against the MER plan. Additionally, evaluation reporting is to be undertaken by year nine of the water sharing plan.

Suggested action 1

DPE-Water and DPE-E&H, with input from DPI-Fisheries should undertake further monitoring and analysis of the Castlereagh wetlands to ascertain their importance as drought refugia and determine whether further protection of environmental values is warranted.

Department response to 2022 review

Noted. Monitoring and analysis of the Castlereagh wetlands to evaluate plan performance is not currently planned. Any future monitoring in the Castlereagh plan area will be identified in the NSW plan Evaluation Program.

Action taken to address NRC recommendation

See action taken for Recommendation 5 e.

Suggested action 2

DPE-Water should consider adopting the rostering arrangements for spearpoint access in the plan for connected systems in other water sharing plan areas including for extraction points in the alluvial groundwater that are likely to be highly connected to the water in riverbed sediments.

Department response to 2022 review

Partially agree. The appropriateness of current water sharing arrangements are reviewed as plans expire. Very highly connected surface water and groundwater systems have linked access rules if:

- the water table is sufficiently shallow for the aquifer to be hydraulically connected to the river/creek bed, either as a losing or gaining stream, and
- the average saturated thickness of the aquifer is no more than 30 m, and
- the average width of the alluvial aquifer is no more than 4 km.

The saturated thickness of the Castlereagh alluvium is much greater than 30 m and downstream of Gilgandra wider than 4 km.

Examples of systems that have linked access rules are the small alluvial systems in the coastal valleys, Peel Alluvium and Cudgegong Alluvium.

Action taken to address NRC recommendation

No action taken.