

# How the department has responded to the Natural Resources Commission Review Recommendations for the Water Sharing Plan for the Hunter Unregulated and Alluvial Water Sources 2009

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This document outlines how the department has responded to the independent review of the *Water Sharing Plan for the Hunter Unregulated and Alluvial Water Sources 2009* under S43A of the *Water Management Act 2000*.

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

The *Water Sharing Plan for the Hunter Unregulated and Alluvial Water Sources 2009* (the Plan) commenced on 1 August 2009 and was due to expire 30 June 2020.

The Natural Resources Commission (NRC) has a role under Section 43A of the Act to review water sharing 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 NRC website.

The NRC may recommend extending or replacing the Plan depending on its review findings. In this instance the NRC recommended the replacement of the Plan. This replacement must be done by no later than 30 June 2022.

Tables 1 and 2 below outline the recommendation and suggested actions arising from the NRC review and the status of the response to these actions by the Department of Planning and Environment – Water (the department).

Table 1. Department response to NRC review recommendations

The Natural Resources Commission recommended (May 2020)	Action taken against NRC recommendation (May 2022)
<b>Overall</b>	
<p><b>1</b> That the Plan is:</p> <ul style="list-style-type: none"> <li>a. extended for a further two years until June 2022.</li> <li>b. replaced by June 2022, to address the recommendations and suggested actions of this report</li> </ul>	<p><b>Closed</b></p> <p>The plan was extended for two years and a replacement plan is expected to commence by 1 July 2022.</p>

**Volume of water that can be extracted**

- 2** To adequately establish and maintain a sustainable limit on the level of water extraction, amend the Plan by the start of the 2021-22 water year to:
- a. establish and publish numeric values for LTAAELs that are updated annually and consider all forms of take, including:
    - i. estimates of current and potential take from harvestable rights
    - ii. capture of rainfall runoff that is exempt from harvestable rights under Environment Protection Licences
    - iii. actual volumes removed from the Williams River by Hunter Water
    - iv. any water taken through cease to pump exemptions (see Recommendation 7)
  - b. remove the high flow conversion clause (Clause 72(d)) that increase the LTAAELs by creating additional entitlements
  - c. reduce the entitlement for Hunter Water to align with its revised LTAAEL.

**Closed**

The way the LTAAEL has been described in the plan has been reviewed. The LTAAEL has been divided into a Standard LTAAEL and Higher-flow LTAAEL. The Standard LTAAEL has been fixed at the volume at the commencement of the replacement plan for entitlement and the first water sharing plan for basic landholder rights. There are very limited circumstances under which the standard LTAAEL can vary, and this is associated with licences being converted from the *Water Act 1912* to *Water Management Act 2000* licences or licences being cancelled for environmental purposes. The LTAAEL has also been updated to be consistent across the coastal systems to include harvestable rights.

A higher flow LTAAEL has been established that can accommodate high flow conversions and other take that can only occur at high flows. This encourages extraction out of low flows where there is significant hydrologic stress and into high flows where the hydrologic stress is lower.

The replacement plan also includes an amendment provision to move to sustainable extraction limits should they be developed in the term of the plan as long as a LTAAEL does not substantially change as a result of this.

Metering information will be available on the coast from December 2023. Once this information is available it will be able to be used to monitor use and ensure compliance with the LTAAEL.

As part of the implementation of the increase to harvestable rights in coastal-draining catchments a catchment-based assessment will be done to determine the appropriateness of the 30% limit on the capture of average regional rainfall runoff. This assessment will consider specific catchment characteristics, farm dam locations and capacities, cumulative impacts and effects on downstream flows.

The department had discussions with Hunter Water Corp including the extraction from the Williams River and reduction of LTAAEL. Williams River take forms part of the volume taken out of Grahamstown Dam. The LTAAEL will remain unchanged. There is potential for increased extraction by Hunter Water from the Paterson River as a result of the Lstock to Glennies pipeline. The LTAAEL could be reconsidered when a decision is made on this extraction.

The Natural Resources Commission recommended (May 2020)	Action taken against NRC recommendation (May 2022)
<p><b>3*</b> By the start of the 2021-22 water year, amend the Plan to remove Clause 54(4)(b) to ensure AWDs for the Hunter Regulated River Alluvial Water Source are aligned with those for the Water Sharing Plan for the Regulated Hunter River Water Source.</p>	<p><b>Closed</b></p> <p>The replacement plan does not include Clause 54 (4). The Available Water Determination (AWD) for Hunter Regulated River Alluvial Water Source remains aligned with the Hunter Regulated River High Security.</p>
<p><b>4</b> Following stakeholder consultation, the replacement Plan (or, if agreed beforehand, an amendment to the Plan) should:</p> <ul style="list-style-type: none"> <li>a. consistently and transparently calculate AWDs each year to ensure compliance with LTAAELs</li> <li>b. align AWDs for users in the unregulated Hunter River, Paterson River and Wallis Creek tidal pool water sources with AWDs for upstream Hunter Regulated Plan users</li> <li>c. include rules following the department’s consideration of how AWDs can be used to manage extraction during drought, including under predicted climate change.</li> </ul>	<p><b>Ongoing</b></p> <p>Metering information will be available on the coast from December 2023. Once this information is available, we will be able use it to monitor water use and ensure compliance with the LTAAEL.</p> <p>An amendment provision has been included in the Plan to enable rules to be established to manage extractions through AWDs for the tidal pool water sources.</p>

5 By the start of the 2021-22 water year, amend the Plan to include interim cease to pump rules for the high ecological value Upper Goulburn and Wollombi water sources and require cease to pump rules to be established for all water sources in the Plan replacement. For the replacement Plan in 2023, reassess cease to pump rules for all water sources and amend rules if needed. The assessment should:

- a. be evidence-based
- b. examine whether current rules can be more effective and efficient
- c. ensure rules are developed for each water source to reflect the specific risks to each water source, with the rationale behind these risks clearly communicated to stakeholders
- d. review the adequacy of rules for maintaining water quality, fish passage and productive aquatic ecosystems
- e. review the adequacy of rules for high ecological value water sources to meet the reproductive requirements of water dependent threatened species by including, for example, first flush rules to ensure water reaches the end of the water source and seasonal rules to increase cease to pump levels at critical ecological periods
- f. consider connectivity between alluvial and surface water licences and ensure cease to pump rules are consistent in connected systems
- g. consider time delays in groundwater-river response in connected systems
- h. consider the range of social and economic impacts from changes to rules and mitigate adverse impacts to the extent possible.

**Closed**

The replacement plan establishes new access rules for the Upper Wollombi Brook and Upper Goulburn River water sources.

Access rules for all water sources have been reviewed and changes made where appropriate. The proposed changes have been based on the risk assessment prepared for the Hunter Unregulated and Alluvial water sharing plan and socio-economic analysis conducted for some water sources.

The risk assessment includes a single reach model that compares the flow regime with and without extraction to determine the likelihood that extraction will impact ecological values. The risk assessment uses the high ecological value aquatic ecosystem (HEVAE) framework to determine ecological values. HEVAE identifies and defines a range of in-stream values (or level of importance) for freshwater river reaches. These values inform priority areas to focused water management, to benefit all water users including the environment. It adopts 4 criteria: diversity, distinctiveness, naturalness and vital habitat. Each criterion relies on state-wide availability of in-stream value data to produce consistent spatial mapping outcomes.

The Natural Resources Commission recommended (May 2020)		Action taken against NRC recommendation (May 2022)
6*	By the start of the 2021-22 water year, amend the Plan to include the NSW Government-endorsed environmental flow rules for Hunter Water and implement these rules to the best extent possible with current infrastructure, fully implementing rules once Seaham Weir is modified.	<p><b>Closed</b></p> <p>The replacement plan establishes new release rules for Chichester Dam and Seaham Weir based on the NSW Government-endorsed environmental flow rules for Hunter Water.</p>
7*	Establish tidal pool access rules for the replacement Plan based on the Hunter hydrodynamic estuary models developed by the Hunter Valley Hydrodynamic Platform and Model(s) Project.	<p><b>Closed</b></p> <p>The department contracted WRL to model proposed access rules through the Hunter hydrodynamic estuary model.</p> <p>The department have explored options to manage extractions from the tidal pool water sources. This has included looking at basing cease to pump rules on inflows from the regulated river or salinity levels in the tidal pool or managing extractions through AWDs for the tidal pool water sources.</p> <p>The replacement plan establishes an amendment provision that enables the plan to be updated by 2024 to manage extractions through AWDs for the tidal pool water sources.</p>

The Natural Resources Commission recommended (May 2020)	Action taken against NRC recommendation (May 2022)
<p><b>8</b> By the start of the 2021-22 water year:</p> <ul style="list-style-type: none"> <li>a. the Natural Resource Access Regulator should audit approvals under Clause 19(8) parts b and c to determine if the clause is being given effect to</li> <li>b. the department should amend Clause 19(8) parts b and c on planned environmental water, which allow for cease to pump exemptions for aquifer interference activities that are either approved by the Environment, <i>Planning and Assessment Act 1979</i> or the Minister, to require 100 percent mitigation of any exemptions</li> <li>c. the department should account for mitigation annually (within the LTAAEL- see Recommendation 2) and daily (the timescale at which cease to pump rules operate).</li> </ul>	<p><b>Closed</b></p> <p>S60I/ 60A of the WMA requires a licence to be held for any water taken as part of a mining activity. Mines are unable to cease taking during CTP times but their take is measured or estimated and reported via their development consent conditions including site water management plans. Mitigation and reporting of take daily is not practical but mitigation can occur on a longer time scale and would be a condition of their development consent.</p> <p>Smaller aquifer interference activities do not always require an approval.</p> <p>An amendment provision is in the plan to review the exemption once the aquifer interference approvals are switched on.</p>

**When water can be extracted**

<p><b>9*</b> Continue processes to finalise the reasonable use guidelines for stock and domestic use and include agreed standards as part of the replacement Plan.*</p>	<p><b>Closed</b></p> <p>Updated domestic and stock estimates have been included in the replacement plan.</p> <p>Reasonable use of basic landholder rights is being considered separately to the water sharing plan replacement process.</p>
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The Natural Resources Commission recommended (May 2020)		Action taken against NRC recommendation (May 2022)
10	Include a performance indicator for harvestable rights in the monitoring, evaluation and reporting (MER) framework (see Recommendation 24).	<p><b>Closed</b></p> <p>Mechanisms to measure run-off harvesting are being considered as part of the implementation of the revised coastal harvestable rights. The water sharing plan includes an amendment provision that requires the department to calculate current levels of harvestable rights take and then to monitor the uptake of harvestable rights in year 3 of the plan. The department is developing a method for this. Based on current plan drafting protocols no additional performance indicators are to be included in the plans and these will instead be in associated monitoring, evaluation and reporting documents.</p>
11*	Include a provision to amend native title rights, with a timeframe of three months to undertake initial amendments of the Plan following native title determinations and other land/water use agreements, and a further 12 months to undertake the detailed engagement, final amendment and water allocation process.	<p><b>Closed</b></p> <p>No native title determinations exist in the Hunter Unregulated and Alluvial plan area. Where native title determinations are granted that include a volume of water the water sharing plan will be amended as soon as practical.</p> <p>Amendments commonly take approximately six months to process as it requires sign off by multiple Ministers.</p>

The Natural Resources Commission recommended (May 2020)	Action taken against NRC recommendation (May 2022)
<p>12* Identify Aboriginal values and uses, objectives and outcomes, and flow allocations in the Plan area, using a strengthened NSW Aboriginal Water Framework (see Suggested action 1).*</p>	<p><b>Closed</b></p> <p>The department reached out to several Aboriginal organisations in the Hunter area but consultation was postponed due to the COVID-19 pandemic. Consultation will continue with Aboriginal organisations over the life of the plan.</p> <p>As part of ongoing work, the department will work toward priorities in the State Water Strategy. Priority 2 of the State Water Strategy is the Recognise First Nations/Aboriginal People’s rights and values and increase access to and ownership of water for cultural and economic purposes.</p> <p>The NSW Government recognises First Nations/Aboriginal People’s rights to water and our aim is to secure a future where water for First Nations/Aboriginal People is embedded within the water planning and management regime in NSW, delivering cultural, spiritual, social, environmental and economic benefit to communities.</p> <p>Actions under the State Water Strategy include:</p> <ul style="list-style-type: none"> <li>• Strengthening the role of First Nations/Aboriginal People in water planning and management</li> <li>• Developing a state-wide Aboriginal water strategy</li> <li>• Providing for Aboriginal ownership of and access to water for cultural and economic purposes</li> <li>• Working with First Nations/Aboriginal People to improve shared water knowledge</li> <li>• Working with First Nations/Aboriginal People to maintain and preserve water-related cultural sites and landscapes</li> </ul> <p>The department is committed to providing greater opportunities for Aboriginal water management and participation in water sharing. A new Aboriginal water directorate has been established within the department and work is progressing on an Aboriginal Water Strategy, which will identify the ways in which we can achieve the priorities under the State Water Strategy. We are establishing an integrated framework for reviewing and reporting against the NSW Water Strategy at least every five years.</p>

The Natural Resources Commission recommended (May 2020)		Action taken against NRC recommendation (May 2022)
13	Co-design licences or other water access options with Aboriginal stakeholders that meet identified needs (for a range of cultural, environmental, social and economic uses) and include these in the Plan, using a strengthened NSW Aboriginal Water Framework.*.	<p><b>Closed</b></p> <p>See actions under recommendation 12 above.</p>
14	Ensure the replacement Plan aligns with identified risks to town water supply in key research, plans and projections (Greater Hunter Regional Strategy 2018, Lower Hunter Water Plan 2014 and the Hunter Water Operating Licence); include identified town water risks as part of MER requirements of the Plan (see Recommendation 24).	<p><b>Closed</b></p> <p>The department is committed to providing greater water security for towns and, in partnership with Resilient Cities and Towns and the Water Utilities group, works collaboratively with Local Councils and Hunter Water Corp. We have worked closely with Hunter Water Corp on the development of the Lower Hunter Water Security Plan and with other parts of the department on the Lostock to Glennies Pipeline. The requirements of the Lower Hunter Water Security Plan and the pipeline have been considered during the development of the <i>Hunter Unregulated and Alluvial Water Sharing Plan 2022</i>.</p> <p>Priority 4 of the State Water Strategy is to increase resilience to changes in water availability (variability and climate change). The 2021/22 action plan looks to improve and apply our understanding of climate variability and change. Including work to determine a methodology and progressively incorporate climate risk data into water sharing plan and environmental water management decision making.</p>

The Natural Resources Commission recommended (May 2020)	Action taken against NRC recommendation (May 2022)
<p><b>15</b> Better communicate the ways in which equitable water sharing is defined and assessed and include a performance indicator for equitable water sharing in the MER framework for the Plan (see Recommendation 24).*</p>	<p><b>Closed</b></p> <p>Consultation on plan replacement was conducted to occur in-line with the communications and engagement plan developed for the replacement process.</p> <p>The water sharing plan template has been updated to improve readability.</p> <p>Supporting information has been developed that is in plain English. This includes the background document, rules summary sheets, FAQs and a fact sheet.</p> <p>The department will work toward priorities in the State Water Strategy. Priority 1 of the State Water Strategy is to build community confidence and capacity through engagement, transparency and accountability. Some of the actions under this priority include:</p> <ul style="list-style-type: none"> <li>• Improve engagement, collaboration and understanding</li> <li>• Increase the amount and quality of publicly available information about water in NSW</li> <li>• Review the regulation of domestic and stock basic landholder rights</li> </ul> <p>The Government will:</p> <ul style="list-style-type: none"> <li>• improve how the water sector engages with communities about water management and make it much easier for water users and the broader community to engage with and understand water management and how decisions are made.</li> <li>• continue to improve the quality and range of water-related information made publicly available and ensure it is easy to find, search and navigate.</li> <li>• review and consult with the community about how domestic and stock basic landholder rights are regulated.</li> </ul> <p>We are establishing an integrated framework for reviewing and reporting against the NSW Water Strategy at least every five years.</p>

The Natural Resources Commission recommended (May 2020)

Action taken against NRC recommendation (May 2022)

Where water can be taken

<p>16</p>	<p>For the replacement plan, review all water sources and determine which water sources should be classified as having high ecological value using all available data and the latest classification methods.</p>	<p><b>Closed</b></p> <p>The department has completed the risk assessment for the Hunter Unregulated and Alluvial WSP area. This has included a single reach model that compares the flow regime with and without extraction to determine the likelihood that extraction will impact ecological values. The risk assessment uses the HEVAE approach to determine ecological values.</p> <p>High probability Groundwater Dependent Ecosystems (GDEs) have been identified and mapped based on the latest available information and method. There is high confidence that the mapping is accurately identifying existing GDEs that are vegetated.</p>
<p>17</p>	<p>For the replacement Plan, reassess the economic dependence of each water source in the Plan area to inform the development of the replacement Plan. The assessment should assess the full range of current and future industries and activities that will require access to secure water, including:</p> <ul style="list-style-type: none"> <li>a. extractive industries (for example, dairy, beef, mining)</li> <li>b. non-extractive industries (for example, tourism, aquaculture)</li> <li>c. community and ecological services (for example, recreation, amenity).</li> </ul>	<p><b>Closed</b></p> <p>The department contracted The Centre for International Economics in March 2021 to review proposed rule changes in several water sources to assess potential impacts of changes to the rules. The results of this assessment influenced the decisions that were made. This assessment considered both extractive and non-extractive industries.</p>

The Natural Resources Commission recommended (May 2020)	Action taken against NRC recommendation (May 2022)
<p><b>18</b> For the replacement Plan in 2023, review current trading rules and the Minister’s Access Dealing Principles Order to determine if they can be revised to support more trade. This review should consider:</p> <ul style="list-style-type: none"> <li>a. environmental impacts of any potential changes and ensure environmental outcomes can be maintained</li> <li>b. whether new options such as trading from low to high flow licences may allow for greater levels of trade without compromising environmental values</li> </ul>	<p><b>Closed</b></p> <p>Trade rules in the plan were reviewed based on the new HEVAE mapping, and likelihood information in the risk assessment. Where appropriate changes were made to trade rules.</p>
<p><b>19</b> Prior to 30 June 2020, review and amend any drafting errors in the Plan around trade and ensure report cards and licence conditions are consistent and clearly communicated to licence holders.</p>	<p><b>Closed</b></p> <p>Trade rules were reviewed and errors corrected in December 2020.</p>
<p><b>20</b> Before the start of the 2021-22 water year, review the Plan, report cards and other supporting documents and update as required to ensure consistency in stated conversion requirements for surface to groundwater licences. Once clarified, conversion requirements should be clearly communicated to licence holders.</p>	<p><b>Closed</b></p> <p>Report cards were corrected on the website in July 2021.</p>

The Natural Resources Commission recommended (May 2020)	Action taken against NRC recommendation (May 2022)
<p><b>21</b> For the replacement Plan in 2023, assess the appropriateness of restrictions on groundwater to surface licence conversions in highly connected upriver alluvial water sources. This should involve consideration of the potential to allow conversions from alluvial to unregulated river access licences to increase the flexibility of water access for users. This assessment should also consider the cease to pump rules for these management zone or water sources. If they are connected for licence conversions and trading, they should also be connected for access rules.</p>	<p><b>Closed</b></p> <p>Where groundwater and unregulated water sources are highly connected the same access rules are applied to both the groundwater and surface water extraction.</p> <p>Where a licence is converted from unregulated to groundwater extraction they are required to maintain the access rules that applied to their unregulated river licence.</p> <p>Groundwater to surface water conversions have been allowed in a larger number of water sources where there is high alluvial groundwater and surface water connectivity.</p>

The Natural Resources Commission recommended (May 2020)	Action taken against NRC recommendation (May 2022)
<p><b>22</b> In the replacement Plan by 2023, improve the protection of groundwater dependent ecosystems by:</p> <ul style="list-style-type: none"> <li>a. listing all identified groundwater dependent ecosystems in Schedule 4 of the Plan, as well as in associated maps and documents</li> <li>b. identifying high, medium and low priority groundwater dependent ecosystems in the Plan and referring to them explicitly as relevant in any groundwater dependent ecosystem protection provisions</li> <li>c. clearly defining groundwater terms and their relevance to the Plan, including connectivity, ecological value, potential and type</li> <li>d. developing mitigation and management rules for groundwater dependent ecosystems identified as potentially impacted by water extraction activities, based on Independent Expert Scientific Committee guidelines</li> <li>e. standardising set back distances for work near identified groundwater dependent ecosystems based on the NSW Aquifer Interference Policy 2012.</li> </ul>	<p><b>Closed</b></p> <p>The replacement plan uses the most recent GDE identification and mapping. We have an identification process that uses the most up to date information and assigns an ecological value to each GDE identified. See, <a href="#">“Methods for the identification of high probability groundwater dependant vegetation ecosystems”</a>. The plan also includes provisions to be updated with new information if it becomes available.</p> <p>The department is working on a process to confirm the presence of GDEs if there is a request to build infrastructure within restricted distances.</p> <p>Our GDE policy limits protection to high-priority GDEs. Moderate- and low-priority GDEs were not considered in the replacement plan.</p> <p>Set back distance rules for new works near GDEs were reviewed and updated to align with standard distance rules as recommended appropriate by hydrogeological expertise.</p> <p>Groundwater terms used in the plan are defined in the plan.</p> <p>The Hunter and Lake Macquarie Coastal Floodplain Alluvial Groundwater Water Sources have been included in the replacement plan to manage alluvial groundwater below the tidal limit.</p>

The Natural Resources Commission recommended (May 2020)

Action taken against NRC recommendation (May 2022)

**Monitoring, evaluation and reporting**

<p><b>23*</b></p>	<p>The replacement Plan needs to be informed by the completion of relevant studies identified at Plan commencement and existing studies and should identify further studies required to improve the knowledge base.</p>	<p><b>Closed</b></p> <p>The replacement plan was informed by several projects including groundwater and river-bed level field verification studies and tidal pool modelling.</p> <p>As part of the implementation of increase to harvestable rights in coastal-draining catchments a catchment-based assessment will be done to determine the appropriateness of the 30% limit on the capture of average regional rainfall runoff. This assessment will consider specific catchment characteristics, farm dam locations and capacities, cumulative impacts and effects on downstream flows.</p> <p>Plan amendment provisions will be assessed in terms of any required supporting studies.</p> <p>Evaluation of water sharing plans will also provide key information to inform future plan replacement.</p>
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The Natural Resources Commission recommended (May 2020)	Action taken against NRC recommendation (May 2022)
<p><b>24*</b> A Plan-specific MER framework should be developed for the replacement plan that reflects state-wide guidelines. The framework should:</p> <ul style="list-style-type: none"> <li>a. ensure objectives and performance indicators are included for all key outcomes of the Plan not currently accounted for, such as harvestable rights, equitable water sharing, urban water supply and salinity</li> <li>b. clearly define outcomes linked to SMART objectives, strategies and performance indicators that align with the water management principles and priorities as set out in the Act</li> <li>c. set clear governance arrangements that define roles, responsibilities and timing for MER activities and adaptive management (including for metering)</li> <li>d. be supported by feasible and appropriate resourcing to support MER</li> <li>e. set timely reporting requirements of the results of MER activities to support transparency, public awareness and compliance, and adaptive management – this should include both government requirements (for example, annual reports to the Minister against Plan objectives and outcomes) and public reporting requirements (for example, an online water reporting platform and dashboard)</li> <li>f. include clear processes and governance for adaptive management</li> <li>g. incorporate relevant MER data that has been completed or is underway outside of the Plan.</li> </ul>	<p><b>Closed</b></p> <p>DPE Water is developing a monitoring, evaluation and reporting (MER) framework.</p> <p>Implementation of the Water sharing plan Evaluation Program will commence in 2021–22 and will be reported annually through the Water Sharing Plan Implementation Program commencing in 2022/23. This will clarify the roles and responsibilities, reporting requirements, governance arrangements and timeframes associated with the program.</p>

The Natural Resources Commission recommended (May 2020)		Action taken against NRC recommendation (May 2022)
25	As part of the Plan replacement in 2023, assess the residual risk to implementing Plan provisions (including LTAAELs, AWDs and cease to pump rules) from users that are not captured under the NSW Government’s metering framework.	<p><b>Closed</b></p> <p>The metering framework was developed considering the risks posed by non metered usage. Under the metering framework, users that are not required to meter will be required to maintain logbooks and could have these records audited by NRAR</p> <p>Metering information will be available on the coast from December 2023. Once this information is available it will be able to be used to monitor use and ensure compliance with the LTAAEL.</p> <p>Progress on implementation will be reported through annual Implementation Programs commencing in 2022/23.</p>
26	As part of the Plan replacement, include principles, governance arrangements, responsibilities and timeframes to ensure the effective implementation of the Plan, including its adaptive management.	<p><b>On going</b></p> <p>Implementation of the Water Sharing Plan Evaluation Program will commence in 2021–22 and will be reported annually through the Water Sharing Plan Implementation Program commencing in 2022/23. This will clarify the roles and responsibilities, reporting requirements, governance arrangements and timeframes associated with the program.</p> <p>Evaluation Plans will include key evaluation questions, indicators and measures mapped to water sharing plan objectives, strategies and performance indicators that are linked to the WM Act's outcomes. This will align with the WM Act priorities.</p> <p>Adaptive management is a key component of the <i>Water Management Act 2000</i> and is included in the MER framework.</p>

Table 2. Department response to NRC Review suggested actions

NRC supporting actions for the department for replacement Plan (May 2020)	Action taken against NRC recommended actions (May 2022)
<b>Suggested actions to support Plan implementation</b>	
<p><b>A*</b> Continue development of a NSW Aboriginal Water Framework by the end of 2020 to provide consistent and transparent guidelines and resourcing for Aboriginal involvement in water planning and management in NSW. At a minimum, the framework should align with relevant international and national guidelines, key legislation, and consider a range of minimum criteria (see Section 6.2.2).*</p>	<p><b>Closed</b></p> <p>See actions under recommendation 12 above.</p>
<p><b>B</b> By the end of 2020, identify state-wide research needs and knowledge gaps across all water sharing plans and address these gaps in collaboration with other organisations and research institutions.*</p>	<p><b>Closed</b></p> <p>Future information needs are identified in the background document to the draft replacement plan. These include:</p> <ul style="list-style-type: none"> <li>• Improved flow and water quality gauging,</li> <li>• Metering and record keeping,</li> <li>• Determining flow requirements for key assets and functions,</li> <li>• Stormwater harvesting,</li> <li>• Harvestable rights,</li> <li>• Setting a sustainable long term average annual extraction limit, and</li> <li>• Climate change impacts.</li> </ul> <p>Plan amendment provisions will be assessed in terms of any required supporting studies.</p> <p>Evaluation of water sharing plans will also provide key information to inform future plan replacement.</p>

NRC supporting actions for the department for replacement Plan (May 2020)		Action taken against NRC recommended actions (May 2022)
C	Continue to develop state-wide MER, including an MER strategy for water planning and management in NSW by end of 2020 which considers key gaps at the state scale (for example, MER standards, reporting requirements, adaptive management principles and processes, resourcing and support).*	<p><b>Closed</b></p> <p>The department is developing a monitoring, evaluation and reporting (MER) framework for coastal water sharing plans. The framework will help coordinate activities conducted by multiple agencies. In this way, MER activities can deliver on specific agency requirements and contribute to a broader understanding of water management and river and wetland health over time. The implementation of any MER programs is dependent on having a defined, long term budget. While every effort is made to maintain a MER program, the ability to implement aspects in a MER is limited by resources.</p> <p>Implementation of the MER program will commence in 2021/22 and will be reported through annual Implementation Program commencing in 2022/23. This will clarify the roles and responsibilities, reporting requirements, governance arrangements and timeframes associated with the program.</p>

NRC supporting actions for the department for replacement Plan (May 2020)	Action taken against NRC recommended actions (May 2022)
<p><b>D</b> Adopt state-wide processes that support the Plan remake and implementation by:</p> <ul style="list-style-type: none"> <li>a. enhancing communication of water sharing plans through active, simple, and consistent language and modes of communication*</li> <li>b. improving implementation and enforcement using clear and consistent governance, roles and responsibilities, and timelines.*</li> </ul>	<p><b>Closed</b></p> <p>Consultation on plan replacement occurred in-line with the communications and engagement plan developed for the replacement process.</p> <p>The water sharing plan template has been updated to improve readability.</p> <p>Supporting information has been developed that is in plain English. This includes the background document, rules summary sheets, FAQs and a fact sheet.</p> <p>The department will work toward priorities in the State Water Strategy. Priority 1 of the State Water Strategy is to build community confidence and capacity through engagement, transparency and accountability. Some of the actions under this priority include:</p> <ul style="list-style-type: none"> <li>• Improve engagement, collaboration and understanding</li> <li>• Increase the amount and quality of publicly available information about water in NSW</li> <li>• Review the regulation of domestic and stock basic landholder rights</li> </ul> <p>The Government will:</p> <ul style="list-style-type: none"> <li>• improve how the water sector engages with communities about water management and make it much easier for water users and the broader community to engage with and understand water management and how decisions are made.</li> <li>• continue to improve the quality and range of water-related information made publicly available and ensure it is easy to find, search and navigate.</li> <li>• review and consult with the community about how domestic and stock basic landholder rights are regulated.</li> </ul> <p>We are establishing an integrated framework for reviewing and reporting against the NSW Water Strategy at least every five years.</p>

NRC supporting actions for the department for replacement Plan (May 2020)		Action taken against NRC recommended actions (May 2022)
<b>E</b>	As part of the Plan replacement, develop well-evidenced and resourced processes for stakeholder engagement in the Plan area, including appropriate forums for engagement, such as stakeholder advisory panels which include a range of stakeholders with diverse interests and localised knowledge of water. This should be part of a strengthened state-wide stakeholder engagement strategy.*	<p><b>Closed</b></p> <p>See actions under recommendation D above.</p>

NRC supporting actions for the department for replacement Plan (May 2020)	Action taken against NRC recommended actions (May 2022)
<p><b>F</b> Prior to the replacement Plan in 2023, adopt integrated catchment management approaches that support the replacement and implementation.*</p>	<p><b>Closed</b></p> <p>Water sharing plans are developed in accordance with the requirements of the WM Act and cannot direct catchment actions not related to water sharing.</p> <p>That said the department will work toward priorities in the State Water Strategy. Priority 4 of the State Water Strategy is to increase resilience to changes in water availability (variability and climate change). Action 4.4 under this priority is to better integrate land use planning and water management.</p> <p>The Government will work to better integrate strategic land use planning with water management frameworks and outcomes. Taking steps to:</p> <ul style="list-style-type: none"> <li>• establish processes to support communication and early engagement to better inform land use, agriculture and industry investment decisions based on a clear understanding of water availability and constraints, and water allocation risk over the immediate and longer term</li> <li>• develop new planning policies, if required, to integrate land use and water cycle management decisions</li> <li>• identify opportunities for the planning system to support water resource health and resilience in a changing climate; for example, through strategic recognition of critical groundwater resources in coastal areas and mitigate impacts from urban development d. improve access to information about water availability to support development</li> <li>• examine opportunities for information on high value water-dependent ecosystems and cultural values to be considered in land use planning decisions.</li> </ul> <p>We are establishing an integrated framework for reviewing and reporting against the NSW Water Strategy at least every five years.</p>

Those recommendations and actions marked with an asterisk (\*) are strategic initiatives which the Commission believes the department should implement across NSW to support all water sharing plans outcomes.