

# How the department has responded to the NRC Review Recommendations for the *Water Sharing Plan for the Central Coast Unregulated and Alluvial Water Sources 2009*

---

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

---

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

In 2016, the Plan was amended to include the former *Water Sharing Plan for the Jilliby Jilliby Creek Water Source 2003* and the *Water Sharing Plan for the Ourimbah Creek Water Source 2003*. The review completed focused on the Plan/s current provisions and does not consider previous versions of provisions governing water sharing of the Jilliby and Ourimbah plans that may have been different prior to the merger of the plans.

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 [here](#) on the NRC website.

The NRC may recommend extending or replacing the Plans depending on its review findings. In this instance the NRC recommended the replacement of the plans. 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 department's response to these actions.

Table 1. Department response to NRC Review recommendations

Natural Resources Commission recommended (April 2020):	Action taken against NRC recommendation (Dec 2021)
<b>Overall</b>	
<p><b>1</b> That the Plan-should be:</p> <ul style="list-style-type: none"> <li>a. extended for a further two years until June 2022 to allow for information exchange between the Plan replacement process and Central Coast Council’s <i>Integrated Water Resource Plan</i> and revised <i>Lower Hunter Water Plan</i> (both due for completion in 2021).</li> <li>b. replaced by June 2022 addressing the recommendations in this report and incorporating relevant considerations in Central Coast Council’s <i>Integrated Water Resource Plan</i> and the revised <i>Lower Hunter Water Plan</i> - in the case that this additional information is not available in time for the replacement Plan, include a clause that the Plan must be amended to integrate this information within 6 months of it becoming available.</li> </ul>	<p><b>Closed</b></p> <p>The plan was extended for two years and a replacement plan is expected to commence before 1 July 2022.</p> <p>The department has worked closely with the Central Coast Council and Hunter Water to inform the replacement plan. The simultaneous development of the Lower Hunter Water Security Plan and Central Coast Council’s integrated Water Resource Plan has enabled a good understanding of future water requirements for both organisations. Neither organisation is planning major augmentation within the life of the plan so no changes were required to the plan at this stage. Changes can be made to the plan if it is in the public interest to do so if augmentation actions are brought forward.</p>

**Environmental outcomes**

Natural Resources Commission recommended (April 2020):		Action taken against NRC recommendation (Dec 2021)
2	In developing the replacement plan, The department should assess whether the long-term average annual extraction limit (LTAAEL) is the best hydrological indicator to manage these water sources. LTAAELs and flow sharing rules at a minimum should be reviewed and revised to incorporate best available information on population growth projections and ensure the Plan functions appropriately under a range of climate change scenarios – the Plan should also allow for Plan amendments to address longer-term water availability.	<p><b>Closed</b></p> <p>Flow sharing rules were reviewed as part of plan replacement. Updated flow data was incorporated, and the appropriateness of access rules was reviewed. Where necessary changes were made.</p> <p>The department is reviewing how the LTAAEL will be set in the future but a new approach is not available in time for the replacement of this plan. The plan can be amended in the future to apply the new method if it is in the public interest to do so.</p> <p>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).</p> <p>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>

<p>Natural Resources Commission recommended (April 2020):</p>	<p>Action taken against NRC recommendation (Dec 2021)</p>
<p><b>3</b> In the next two years during replacement Plan development, collect (as required) and report (reviewed in year four at a minimum) to:</p> <ul style="list-style-type: none"> <li>a. describe the natural flow regime</li> <li>b. map and ground-truth the presence and extent of water dependent environmental assets including estuarine and coastal ecosystems</li> <li>c. identify key assets and classify high priority ecosystems and high ecological value aquatic ecosystems using the High Ecological Value Aquatic Ecosystem framework, including those assets identified in (b)</li> <li>d. define the flow requirements of key assets</li> <li>e. determine the impact of the Plan on the flow regime identified in (a) and the flow requirements of key assets identified in (d).</li> </ul>	<p><b>Closed</b></p> <p>The department has completed the risk assessment for the Central Coast 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 high ecological value aquatic ecosystem (HEVAE) framework to determine ecological values.</p> <p>HEVAE identifies and defines a range of in-stream values (or level of importance) for freshwater river reaches. These values inform priority areas for 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.</p> <p>High priority 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. GDEs in the schedule to the plan have also been reviewed and included where they are not on the GDE map.</p>

<p>Natural Resources Commission recommended (April 2020):</p>	<p>Action taken against NRC recommendation (Dec 2021)</p>
<p><b>4</b> To strengthen environmental water sharing rules, The department should:</p> <ul style="list-style-type: none"> <li>a. define water sharing rules - including flow class provisions - in the replacement Plan - this should be based on environmental water requirements and prioritise the protection of water sources and their dependent ecosystems based on continuing risk assessments of coastal water sharing plans</li> <li>b. build on existing hydrological flow studies and assess estuarine flow requirements, adequate flows to support fish passage and other key species</li> <li>c. revise 'no visible flows' so that flow sharing rules are based on best available evidence and key environmental assets are protected, particularly in those water sources with high ecological value</li> <li>d. revise flow reference points for suitability, this may include additional reference points to support measured cease to pump rules rather than 'no visible flow' access rules</li> <li>e. revise flow sharing rules for the Wyong River</li> <li>f. revise total daily extraction limits (TDELs) for Ourimbah Creek and Wyong River</li> <li>g. include flow sharing provisions for Mangrove Creek, and Mooney Mooney Creek</li> <li>h. until better information is available to support implementation of a. to g., incorporate a suitable buffer factor in cease to pump rules to allow for uncertainty.</li> </ul>	<p><b>Closed</b></p> <p>The completed risk assessment has been used to identify water sources and downstream estuaries at high or medium risk from extraction. Where these water sources were identified the current access rules and flow reference points were reviewed to determine if they were appropriate. Changes to flow sharing rules include the application of access rules in the Mangrove Creek and Mooney Mooney Creek water sources where they did not exist previously and inclusion of a commence to pump rule in Wyong River and Ourimbah Creek water sources to protect instream habitats.</p> <p>TDELs for local water utility extraction were appropriate to be maintained but are now referred to as system operation rules.</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>Natural Resources Commission recommended (April 2020):</p>	<p>Action taken against NRC recommendation (Dec 2021)</p>
<p><b>5</b> In designing the replacement plan, the department should review groundwater-dependent ecosystem requirements to build on groundwater assessment processes used for other recent water sharing plans, specifically to:</p> <ul style="list-style-type: none"> <li>a. clearly define groundwater terms and their relevance to the Plan, including connectivity, ecological value, potential and type - connectivity should include both discharge of groundwater to surface water and surface water recharge to groundwater systems</li> <li>b. confirm the presence, classification and extent of groundwater-dependent ecosystems across the Plan area to reflect current knowledge obtained through on-ground studies and allow for plan amendments as studies progress</li> <li>c. define if any action is required regarding potential impacts on low- or medium-priority groundwater-dependent ecosystems</li> <li>d. continue the review of set back distances for work near identified groundwater dependent ecosystems and standardise these based on the <i>NSW Aquifer Interference Policy 2012</i>.</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 deemed appropriate by hydrological expertise.</p> <p>Groundwater terms used in the plan are defined in the plan.</p>

Natural Resources Commission recommended (April 2020):	Action taken against NRC recommendation (Dec 2021)
<p><b>6</b> Consider future mining activities and their potential impacts to water sources as part of the replacement Plans:</p> <ul style="list-style-type: none"> <li>a. at a minimum, the Plan should require full mitigation of groundwater drawdown take from mining operations</li> <li>b. the department should account for any mitigation annually (within the LTAAEL, see Section 4.2) and daily (the timescale at which cease to pump rules operate).</li> </ul>	<p><b>Closed</b></p> <p>Impacts on water resources by mining activities are managed under the EP&amp;A Act. Mitigation of mining activities occurs under conditions imposed on the development consent.</p> <p>Groundwater take from bore fields is assessed through hydrogeological assessments and specific conditions on take are recommended for development consent. The department also assesses the impacts of trade to and from mines.</p> <p>The department is considering a way to bring mine take into the LTAAEL but notes that some mine take cannot be stopped as it is induced by mining operations so cease to pump rules are not an appropriate management tool.</p>

**Social and cultural outcomes**

- 7\*** Continue to improve Aboriginal engagement and outcomes, including work to:
- a. strengthen and expand the nation-by-nation engagement developed as part of the inland water resource plan process to coastal areas and to other representative Aboriginal groups
  - b. use the strengthened engagement process to identify Aboriginal values and uses, objectives and outcomes, and flow allocations in the Plan area, then link these to strategies, performance indicators and measuring and reporting requirements
  - c. simplify licence categories or co-design other water access mechanisms in consultation with Aboriginal peoples that can support identified Aboriginal water values, rights and uses
  - d. include a timeframe of three months to initially amend the Plan to acknowledge any Native Title determinations and Indigenous Land Use Agreements and allocate enough time to undertake detailed engagement with stakeholders on the final Plan amendment and allocation process.

**Closed**

The department reached out to a number of Aboriginal organisations in the Central Coast area including the Darkinjung Local Aboriginal Land council. There was no response from these organisations to an offer to meet to discuss the water sharing plan.

As part of ongoing work by the department we 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.

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.

Actions under the State Water Strategy include:

- Strengthening the role of First Nations/Aboriginal People in water planning and management
- Developing a state-wide Aboriginal water strategy
- Providing for Aboriginal ownership of and access to water for cultural and economic purposes
- Working with First Nations/Aboriginal People to improve shared water knowledge
- Working with First Nations/Aboriginal People to maintain and preserve water-related cultural sites and landscapes.

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.

Natural Resources Commission recommended  
(April 2020):

Action taken against NRC recommendation  
(Dec 2021)

**Monitoring, evaluation and reporting**

<p><b>8</b></p>	<p>The department should include the following in the replacement plan:</p> <ul style="list-style-type: none"> <li>a. SMART (specific, measurable, achievable, relevant, timely) objectives, strategies and performance indicators that align with the water management principles in the Act and clearly address the prioritisation of environmental, social (including native title) and economic outcomes</li> <li>b. clear logical links demonstrated between the objectives, strategies, performance indicators and rules.</li> </ul>	<p><b>Closed</b></p> <p>Objectives in the replacement plan are SMART and show a clear link between vision, objectives, strategies and performance indicators and are divided into environmental, social, economic and cultural areas.</p>
<p><b>9</b></p>	<p>Finalise the MER framework for coastal water sharing plans by 2020, and include the following as part of the replacement Plan:</p> <ul style="list-style-type: none"> <li>a. plan-specific MER requirements-following the established guidelines</li> <li>b. clear governance arrangements for MER, including roles and responsibilities</li> <li>c. timely public reporting of the results of monitoring and evaluation activities to support transparency, public awareness and active compliance</li> <li>d. appropriate governance arrangements and timeframes for adaptation and improvement, particularly in response to new information such as climate change</li> <li>e. metering and record keeping provisions consistent with the NSW Government’s new framework for measurement and metering of water take.</li> </ul>	<p><b>Closed</b></p> <p>The department 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>

**Plan updates and implementation**

<p>Natural Resources Commission recommended (April 2020):</p>	<p>Action taken against NRC recommendation (Dec 2021)</p>
<p><b>10</b> The department should revise provisions in the replacement plan to:</p> <ul style="list-style-type: none"> <li>a. reflect current governance and infrastructure arrangements</li> <li>b. revisit the Plan boundary so that all alluvial groundwater sources are included</li> <li>c. improve the clarity of language.</li> </ul>	<p><b>Closed</b></p> <p>The Central Coast Coastal Floodplain Alluvial Groundwater Water Source has been included in the water sharing plan. This means that all alluvial groundwater sources in the area are included in a plan.</p> <p>There is a Communication and Engagement plan that has been followed for the water sharing plan replacement process and the language in the water sharing plan has been updated.</p> <p>Language will continue to be refined as the template for coastal unregulated and alluvial water sharing plans is finalised by Parliamentary Counsel's Office.</p> <p>The water sharing plan was developed in consultation with major stakeholders including Central Coast Council, NSW Farmers, and WaterNSW. NRAR, DPI Ag, DPI Fisheries and EES have endorsed the plan through the Coastal Water Policy and Planning Working Group and the Regional Water Senior Officers Group.</p>

Table 2. Department response to NRC Review suggested actions.

NRC suggested actions for the department to support the replacement Plan (April 2021)	Action taken against NRC suggested actions (December 2021)
<b>Overall</b>	
<p><b>A</b> The department should consult with stakeholders in the Greater Hunter region to identify and address potential opportunities or impacts arising from the replacement of other plans in this region, particularly the <i>Water Sharing Plan for the Hunter Unregulated and Alluvial Water Sources 2009</i>. This may include concurrent timing for the development of replacement plans with similar expiry timeframes and changes (if warranted) to other plans.</p>	<p><b>Closed</b></p> <p>The Hunter Unregulated and Alluvial water sharing plan is being replaced at a similar time to the Central Coast water sharing plan.</p> <p>The department Coastal Planning have been working with Hunter Water Corp and Central Coast Council while they develop the Lower Hunter Water Security Plan and the Central Coast Council Integrated Water Resource Plan.</p>
<b>Environmental outcomes</b>	
<p><b>B</b> The department should work with WaterNSW to improve the quality of the flow record of each water source. At a minimum, The department should:</p> <ul style="list-style-type: none"> <li>a. work with WaterNSW to install flow measurement infrastructure at Mangrove Creek and Mooney Mooney Creek</li> <li>b. ensure flow data record is reliable</li> <li>c. ensure models account for secular flow variations to inform flow sharing provisions in the new Plan.</li> </ul>	<p><b>Closed</b></p> <p>The department is currently working with WaterNSW undertaking a review of the Coastal Hydrometric Network. The department will continue to work with WNSW to look for opportunities to improve monitoring infrastructure in this area that can support better planning outcomes in the future.</p> <p>The department used the best available flow data at the time to assess the access rules. This included ensuring flow data was cleansed (with poor quality data removed) and the additional ten years of flow data included.</p>
<b>Social and cultural outcomes</b>	

<p><b>C*</b></p>	<p>Continue to develop the NSW Aboriginal Water Framework by end-2020 to provide consistent and transparent guidelines and resourcing for Aboriginal water access and involvement in water planning and management. At a minimum, the framework should consider:</p> <ul style="list-style-type: none"> <li>a. relevant guidelines and legislation, including any need for legislative reforms</li> <li>b. Aboriginal water values and its uses</li> <li>c. processes for allocating water for Aboriginal interests including cultural, environmental, social and economic purposes</li> <li>d. processes for improving Aboriginal water access and use, through simplified licencing or other identified mechanisms</li> <li>e. clear requirements for including native title determinations and proactive processes for undertaking other land/water use agreements</li> <li>f. strengthened Aboriginal engagement processes across the state to expand on the basin engagement process, broaden the stakeholder base (to include Traditional Owners, Nations, Local Aboriginal Land Councils and other relevant groups), and increase Aboriginal staff with capacity to lead and maintain engagement.</li> <li>g. appropriate Aboriginal-led governance and decision-making arrangements, such as an Aboriginal Water Holder</li> <li>h. adequate resources including dedicated Aboriginal staff with capability in water planning and management, and funding, such as an Aboriginal Water Trust.</li> </ul>	<p>See actions under recommendation 7.</p>
------------------	--	--

**Economic outcomes**

NRC suggested actions for the department to support the replacement Plan (April 2021)		Action taken against NRC suggested actions (December 2021)
<p><b>D*</b></p> <p>The department should continue to implement their program to improve all trade information, including coordination with agencies to:</p> <ul style="list-style-type: none"> <li>a. ensure consistent data sets exist across agencies, so that trade data are consistent</li> <li>b. support improvements to price reporting by licence holders</li> <li>c. ensure account management rules are fit for purpose and implementable</li> <li>d. consider environmental and industry impacts and part of any review of trade rules.</li> </ul>	<p><b>Closed</b></p> <p>The department is working collaboratively with WNSW to ensure trade information collected is reported and reliable.</p> <p>Groundwater trade assessment information is available in the Assessing groundwater applications fact sheet.</p> <p>WaterNSW has recently updated their trade form to enable more information to be collected including information around \$0 trades.</p> <p>The department have developed a Trade Dashboard that provides transparency to water market participants. It can be found at <a href="https://www.industry.nsw.gov.au/water/licensing-trade/trade/dashboard">https://www.industry.nsw.gov.au/water/licensing-trade/trade/dashboard</a>.</p> <p>Account management rules and trade rules were reviewed as part of plan replacement and no changes were considered necessary.</p> <p>The department will work toward priorities in the State Water Strategy. Priority 5 of the State Water Strategy is to support economic growth and resilient industries within a capped system.</p> <p>An action under this priority is to improve the operation and transparency of water trade in NSW. Government will look to improve the operation of the NSW water market by improving the transparency of trading activities and access to information about these activities, reviewing the need for a regulatory framework covering water brokers and intermediaries to improve confidence in how the market is regulated.</p>	

**Monitoring, evaluation and reporting**

NRC suggested actions for the department to support the replacement Plan (April 2021)		Action taken against NRC suggested actions (December 2021)
<p><b>E*</b></p> <p>The department identify Plan-specific and state-wide research needs and knowledge gaps across all water sharing plans and seek to address these gaps in collaboration with other organisations and research institutions.</p>	<p><b>Closed</b></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>	
<p><b>F*</b></p> <p>The department should make all monitoring, modelling and research publicly available to improve accountability and transparency.</p>	<p><b>Closed</b></p> <p>The department has published the risk assessment for Central Coast which informed the plan replacement process. Other information relied upon is referenced in the supporting information for public exhibition which was published on the departments' website.</p> <p>WaterNSW is responsible for and publishes flow gauge data.</p> <p>Other agencies are responsible for much of the monitoring in the Central Coast area.</p> <p>Trade data is available on the Trade Dashboard and theWNSW WaterInsights portal contains a lot of water source specific information.</p>	

**Plan updates and implementation**

- G\*** Adopt processes that support key social outcomes throughout the remake and implementation of the Plan:
- a. enhance communication of the Plan through active, simple, and consistent language and modes of communication
  - b. improve implementation and enforcement of the Plan using clear and consistent governance, roles and responsibilities
  - e. strengthen existing processes for stakeholder engagement developed as part of the water reform action plan, and include an area-specific stakeholder engagement plan - this needs to specify appropriate forums for engagement, such as a {such as a stakeholder advisory panel}, which includes a range of stakeholders with diverse interests and localised knowledge of water
  - d. better communicate the current balance of water sharing and include a relevant performance indicator.

**Closed**

Consultation on plan replacement occurred in-line with the Communications and Engagement plan developed for the replacement process.

Targeted consultation with water users occurred via Teams during the plan replacement process. Question and answer sessions and a presentation on the draft plan occurred via a webinar due to the COVID-19 pandemic. Supporting information has been developed that is in plain English. This includes the background document, rules summary sheets, FAQs and a fact sheet.

The plan was developed in consultation with NRAR who were kept informed of any rule changes and provided advice on appropriate wording to use to aid developing simple, meaningful and enforceable conditions.

The department continues to work on a website that will contain a plain English version of the plan rules.

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:

- Improve engagement, collaboration and understanding
- Increase the amount and quality of publicly available information about water in NSW
- Review the regulation of domestic and stock basic landholder rights.

The Government will:

- 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
- continue to improve the quality and range of water-related information made publicly available and ensure it is easy to find, search and navigate
- review and consult with the community about how domestic and stock basic landholder rights are regulated.

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.