

How the department has responded to the Natural Resources Commission Review Recommendations for the Water Sharing Plan for the Towamba River Unregulated and Alluvial Water Sources 2010

This document outlines how the department has responded to the independent review of the *Water Sharing Plan for the Towamba River Unregulated and Alluvial Water Sources 2010* under S43A of the *Water Management Act 2000*.

Water sharing 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 water sharing plan, which is typically 10 years, unless it is extended.

The *Water Sharing Plan for the Towamba River Unregulated and Alluvial Water Sources 2010* (the plan) commenced on 17 December 2010 and was due to expire 30 June 2021.

The Natural Resources Commission (NRC) has a role under Section 43A of the WM 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](#) (PDF 3.2MB) is available on the NRC's 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 by no later than 30 June 2023.

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).

The Towamba, Bega and Brogo, and Murrah-Wallaga water sharing plans were reviewed in the same document. The recommendations and suggested actions in Table 1 and Table 2 are relevant to the Towamba plan only.

Table 1. Department response to NRC review recommendations

The Natural Resources Commission recommended (May 2021)	Action taken on NRC recommendation (September 2022)
<p>1 Overall</p> <p>That the plan is:</p> <ul style="list-style-type: none"> a. extended for a further two years until 30 June 2023, to allow time to complete data collection, analysis and modelling b. replaced by 1 July 2023 supported by the completion of the recommendations of the review and consideration of outcomes from the South Coast Regional Water Strategy and other regional planning initiatives where relevant. 	<p>Closed</p> <p>The plan was extended for two years and a replacement plan is expected to commence on or before 1 July 2023.</p> <p>The draft replacement water sharing plan has considered options being reviewed by the South Coast Regional Water Strategy and increased harvestable rights.</p>
<p>2 Ensuring sustainable extraction</p> <p>By 1 July 2023, to ensure all extraction under the plans is managed to protect, preserve and maintain the water sources, aquifer integrity and dependant ecosystems, the department should:</p> <ul style="list-style-type: none"> a. establish and publish sustainable fixed, numeric long-term average-annual extraction limits (LTAAELs), ensuring they are based on best available information, including ecological requirements, an accurate estimate of basic landholder rights and climate change b. undertake regular LTAAEL compliance assessments, ensuring they are underpinned by clear, publicly available procedures requiring consideration of basic landholder rights estimates that are no more than five years old when assessing compliance with extraction limits. 	<p>Closed</p> <p>The way the LTAAEL has been described in the plan has been reviewed. It has been divided into a standard LTAAEL and higher-flow LTAAEL and fixed at the volume at the commencement of the replacement plan for entitlement and 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 <i>Water Act 1912</i> to <i>Water Management Act 2000</i> 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 volumes.</p> <p>Current licence entitlement in each water source has been updated.</p> <p>The appropriateness of high flow conversion licences has been reviewed and changes made to ensure only water sources that can support high flow conversions allow them. This assessment included a review of instream and downstream ecological factors.</p>

The Natural Resources Commission recommended (May 2021)	Action taken on NRC recommendation (September 2022)
<p>5 Ensuring sustainable extraction</p> <p>By 1 July 2023, the department should complete their review of trade for coastal catchments and review and address trade barriers for these plans, including but not limited to options to combine water sources and increase flexibility to trade into high flows. Any changes to trade rules should maintain protections for high-value aquatic ecosystems and cultural values, including considering latest HEVAE [high ecological value aquatic ecosystem] mapping and risk assessments.</p>	<p>Closed</p> <p>Trade opportunities have been reviewed in the plan. Where risks from extraction have reduced as identified in the risk assessment, potential for trade was reviewed. Generally, trade is allowed between hydrologically connected water sources where hydrologic stress is low or medium. Water sources with medium hydrologic stress are proposed to only allow trade in once shares have been traded out so there is no net gain of extraction or exacerbation of hydrologic stress in those water sources.</p> <p>The location of high values based on HEVAE mapping was taken into account, and these high value areas are generally avoided. For example, where high values exist in upper reaches of a water source, upstream trade within the water source is prohibited.</p>
<p>6 Ensuring sustainable extraction</p> <p>To ensure estuary condition is maintained in the plan areas, the department should:</p> <ol style="list-style-type: none"> by 1 July 2023, establish clear objectives and estuarine flow requirements for estuaries across the plan areas by 1 July 2023, include provisions to achieve the estuarine flow requirements defined in (a), including clear agency responsibilities use data from the department’s Environment and Heritage Group’s estuarine monitoring program and NSW Food Authority to monitor estuarine condition and identify changes to estuarine condition that may be impacted by the plans. Plan provisions should be adjusted as required to ensure that there is sufficient planned environmental water to respond to the needs of these estuaries. 	<p>Closed</p> <p>Decisions around flow classes and access rules consider the instream, downstream and GDE values and impact on these values from extraction. The risk assessment considers the value of each estuary and evaluates the risks of extraction impacting on the ecological values of the estuaries.</p> <p>Water sharing rule decisions take into account the risks to estuaries identified in the risk assessment.</p>

The Natural Resources Commission recommended (May 2021)	Action taken on NRC recommendation (September 2022)
<p>7 Ensuring sustainable extraction</p> <p>By 1 July 2023, to ensure threatened species and endangered ecological communities are protected, the department should:</p> <ol style="list-style-type: none"> finalise work to establish environmental flow requirements for coastal aquatic species and ensure that plan rules adequately protect them amend plan rules [for example, cease to pump rules and TDELs (total daily extraction limits)] where evidence indicates unacceptable impact on low flows implement monitoring within the plan areas at key strategic locations where significant extraction overlays high environmental values complete HEVAE mapping so that there is an updated assessment of strategic monitoring locations update any necessary plan provisions to account for protection of threatened species where updated HEVAE assessment and extraction pressure information identifies that current rules are insufficient ensure alignment with environmental objectives outlined in relevant NSW Government strategic plans including the Batemans Marine Park Operational Plan. 	<p>Closed</p> <p>The department has completed the risk assessment for the Towamba River plan area.</p> <p>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 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>Decisions around flow classes and access rules consider the latest available science for instream, downstream and GDE values and impact on these values from extraction. Bateman’s Marine Park is over 60 kilometres north of the water sharing plan area so it is not considered to be directly impacted by extraction under the Towamba water sharing plan. During the development of the replacement plan, we reviewed relevant water management frameworks and strategies.</p>

The Natural Resources Commission recommended (May 2021)	Action taken on NRC recommendation (September 2022)
<p>8 Ensuring sustainable extraction</p> <p>By 1 July 2023, to improve the management of connectivity to protect water sources and dependent ecosystems, the department should:</p> <ul style="list-style-type: none"> a) use best available evidence and undertake additional required studies to identify highly connected systems, including the Mid Bega River Sands b) revise access rules accordingly to include new bore licences beyond 40 metres from the high bank of a river for areas that are identified in (a) as being highly connected and stage access rules for existing bores c) determine the level of connectivity between the aquifers and rivers in the plans and Coastal Sands aquifers and, if highly connected, provide protection d) include comprehensive definitions for surface-groundwater connectivity in the Ppan dictionaries. 	<p>Closed</p> <p>Connectivity between surface water and groundwater in the underlying South Coast Groundwater Water Sharing Plan and the Towamba Coastal Floodplain alluvium was determined to have little connectivity. Definitions for surface water and alluvial water are provided in the plan.</p>

The Natural Resources Commission recommended (May 2021)	Action taken on NRC recommendation (September 2022)
<p>9 Ensuring sustainable extraction</p> <p>By 1 July 2023, to improve the management of GDEs, the department should:</p> <ul style="list-style-type: none"> a) map and ground-truth the presence and extent of GDEs, including estuarine and coastal ecosystems and define their groundwater requirements b) clearly define groundwater terms and their relevance to the plans, including GDE priority and types (including high-priority GDEs) c) Review the GDEs in the South Coast Groundwater Plan and where appropriate recognise them in the South Coast replacement plans d) review setback distances for work near identified GDEs and standardise them based on the NSW Aquifer Interference Policy 2012. 	<p>Closed</p> <p>The replacement plan uses the most recent GDE identification and mapping, which uses the best available information and <u>method</u>. We have an identification process that uses the most up to date information and assigns an ecological value to each GDE identified. The plan also includes provisions to be updated with new information if it becomes available.</p> <p>We are 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 protects 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> <p>The Towamba River Coastal Floodplain Alluvial Groundwater Water Source has been included in the draft plan to manage alluvial groundwater below the mangrove limit.</p>

The Natural Resources Commission recommended (May 2021)	Action taken on NRC recommendation (September 2022)
<p>11 Ensuring sustainable extraction</p> <p>By 1 July 2023, to assist the environment in recovering from bushfires and minimise future risks the department should:</p> <ul style="list-style-type: none"> a) collaborate with DPI-Fisheries and DPE-ESS to better understand the impacts of bushfires on aquatic species and determine any specific flow requirements that may aid recovery (e.g. cues for fish spawning) b) include a provision that can be triggered to support the protection of particular flow events to aid the post-fire recovery of aquatic ecosystems. 	<p>Closed</p> <p>Specific flow requirements including spawning cues were considered during development of the draft Towamba plan. DPE Environment and Heritage, and DPI Fisheries sit on the interagency working group, and helped identify where the Australian Grayling was located throughout the plan area. This informed investigations into plan rules which identified that fresh and high flows experience a medium likelihood of impacts due to extraction, and rules in the plan would not impact migration of the Australian Grayling or the Australian Bass which occurs in the fresh and high flows.</p> <p>Bushfire related impacts are not for inclusion in the water sharing plan. It may be identified that this information is important for inclusion in the Monitoring, Evaluation and Reporting document. Some specific work in this area is being progressed by the department’s Environment and Heritage Group and University of NSW on impacts of bushfires on water quality and monitoring water quality recovery for key estuaries that were burnt out.</p>

The Natural Resources Commission recommended (May 2021)	Action taken on NRC recommendation (September 2022)
<p>12 Securing town water supply</p> <p>The department should continue to work with Bega Valley Shire Council as part of the regional water strategy process and plan remakes to improve town water supply systems and access. This should include:</p> <ul style="list-style-type: none"> a) revisiting the assignment of total daily extraction limits to ensure that they are sustainable and don't unnecessarily constrain town water supply needs on a daily basis or compromise environmental values or other water users (notably domestic and stock use) b) consideration of an emergency management provision that, when triggered, allows the local water utility to temporarily draw on individual water sources in emergency situations c) investigating revision of Plan provisions that provide Bega Valley Shire Council with the flexibility to optimise its water supply systems to meet peak daily demand and critical human water needs in emergency situations d) ensuring that plan provisions are based on best available information including: <ul style="list-style-type: none"> - up-to-date flow data - Bega groundwater modelling, including scenarios around increasing individual and total daily extraction limits (TDELs) and where possible, using these models to undertake more detailed assessment of the risks of saline intrusion of water sources used for groundwater - latest climate data, including stochastic modelling of climate change undertaken as part of the South Coast Regional Water Strategy 	<p>Closed</p> <p>TDELs relating to unregulated river access licences have been removed from the plan as they cannot be implemented. One TDEL relating to Bega Valley Shire Council's extraction in the alluvial groundwater of Lower Towamba River Water Source has been retained. This TDEL restricts take to 1 ML/day in A class when there is no flow downstream of the take site (Kiah bore fields). The water source flow reference point is a gauge located upstream of the Council's take site, and this rule is intended to reflect local conditions and prevent over extraction of the aquifer. It has been moved to the specific access rules section of the plan so that it can be added to Bega Valley Shire Council's licence.</p> <p>The existing plan includes a specific access rule for Bega Valley Shire Council's extraction in the Lower Towamba River Water Source which restricts take in the very low flow class to 1ML/day when storage in Ben Boyd Dam is more than 50%, and allows an increase to 2.5 ML/day when storage is less than 50% in the dam. This rule acts to give Council more access in drought circumstances, and will be retained.</p> <p>Updated flow data was used during plan development.</p>

The Natural Resources Commission recommended (May 2021)		Action taken on NRC recommendation (September 2022)
<p>13</p> <p>Improving outcomes for Aboriginal people</p> <p>The department should amend all plans to acknowledge the registered native title claim for the South Coast People. Sufficient additional time should be allowed to undertake detailed engagement with Traditional Owners on options to support these values and uses (including fishing) and make any final amendments.</p>	<p>Closed</p> <p>No native title determinations exist in the Towamba plan area. Where native title determinations are granted the water sharing plan will be amended as soon as practical. Amendments commonly take approximately six months to process as it requires sign off by multiple ministers.</p>	

14 Improving outcomes for Aboriginal people

In order to better achieve cultural outcomes, by 1 July 2023, the department should:

- a) identify and protect known high value cultural sites in the replacement plans
- b) undertake further work with a range of Aboriginal knowledge holders, including Aboriginal women, to better understand water values and uses (including fishing), identify and protect them, and better support water access and use
- c) ensure that where additional allocations become available within the south coast Plans the Aboriginal water needs including any cultural water allocations are assessed as a priority
- d) undertake state-wide actions identified in previous Commission water sharing plan reviews to improve consideration and respect for native title and Aboriginal values in water sharing plans and ensure these are included in the NSW Aboriginal Water Strategy.

Closed

Aboriginal consultation was conducted in June 2021 in conjunction with Regional Water Strategies. This consultation intended to inform Aboriginal people in the Towamba, Bega-Brogo and Murrah-Wallaga area about water sharing plans. The consultation also sought to identify ways the water sharing plan could protect or enhance values held by Aboriginal groups in the plan area.

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.

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.

The Natural Resources Commission recommended (May 2021)		Action taken on NRC recommendation (September 2022)
15	<p>Monitoring, evaluation and reporting (MER)</p> <p>By 1 July 2023, to improve MER and plan implementation continue to implement state-wide recommendations and suggested actions made in previous Commission water sharing plan reviews (see for reference R 18 and SA G-K in the Commission’s Review of the water sharing plans for the Richmond and Tweed unregulated and alluvial water sources – Final Report).</p>	<p>Closed</p> <p>Implementation of the MER program will commence in 2023. This will clarify the roles and responsibilities, reporting requirements, governance arrangements and timeframes associated with the program.</p>

Table 2. Department response to NRC Review suggested actions

NRC suggested actions for the department to support the replacement Plan (May 2021)		Action taken against NRC suggested actions (August 2022)
A	<p>Strengthening environmental protection</p> <p>NSW agencies continue to work with landholders to support riparian management throughout the catchments.</p>	<p>Closed</p> <p>The department supports ongoing consideration of integrated catchment management approaches where possible. Noting that Water Sharing Plans are developed in accordance with the requirements of the <i>Water Management Act 2000</i> and riparian management is not for inclusion in a water sharing plan.</p> <p>Riparian condition may be identified as a parameter for inclusion in the Monitoring, Evaluation and Reporting document.</p>
B	<p>Securing town water supply</p> <p>The department should consider simplifying the process for developing and implementing Integrated Water Cycle Management Strategies and assist with upskilling local water utilities in developing and implementing strategies.</p>	<p>Out of scope of water sharing plan replacement.</p>
C	<p>MER and implementation</p> <p>The department work with other agencies, including DPE-Fisheries and DPE-Environment and Heritage to implement MER programs to examine bushfire impacts and potential implications for plan rules to aid recovery of aquatic ecosystems.</p>	<p>Response as per recommendation 11.</p>