

How the department has responded to the Natural Resources Commission Review Recommendations for the Water Sharing Plan for the Tweed River Area

This document outlines how the department has responded to the independent review of the *Water Sharing Plan for the Tweed River Area 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 Tweed River Area Unregulated and Alluvial Water Sources 2010* (the initial plan) was due to expire 17 December 2020.

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 water sharing plans depending on its review findings. In this instance the NRC recommended the replacement of the initial plan. This replacement had to be done 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 Tweed River and Richmond River area water sharing plans were reviewed in the same document. The recommendations and suggested actions in Table 1 and Table 2 are relevant to the Tweed River Area only.

Table 1. The department response to NRC review recommendations

The Natural Resources Commission recommended (February 2021)		Action taken to address NRC recommendation (April 2023)
R1	<p>The plan should be:</p> <ul style="list-style-type: none"> a) Extended for a further two years until 30 June 2023, with priority actions progressed in the interim, to allow time to complete data collection, analysis and modelling and to consider regional water planning processes currently underway. b) Replaced by 1 July 2023, supported by the completion of the recommendations of this review. 	<p>Closed</p> <p>The plan was extended for two years, with a replacement plan to commence by 1 July 2023. The draft replacement water sharing plan has considered the best available information in its development and considered the draft Far North Coast Regional Water Strategy.</p>

The Natural Resources Commission recommended (February 2021)		Action taken to address NRC recommendation (April 2023)
<p>R3</p>	<p>By 1 July 2023, to ensure town water supply risks are managed while maintaining environmental outcomes in the Tweed Plan, the department should:</p> <ul style="list-style-type: none"> a) consider the outcomes of investigations undertaken as part of the Bray Park Weir Tidal Inundation Project (including fishway design) and Clarrie Hall Dam augmentation environmental impact statement b) review demand forecast and other studies from Tweed Shire Council to determine if the share component of the local water utility access licences requires an increase to meet the forecast demand for Tyalgum and Uki, or whether this could be met through other measures c) retain provisions that support the prohibition of in-stream dams on third order and greater streams (including in the Byrrill Creek Water Source) and ensure these provisions reflect the latest HEVAE mapping and key fish habitat mapping. 	<p>Complete</p> <p>New in-river dams on third order or larger streams continue to be prohibited in the Mid Tweed River and Bryrrill Creek water sources. An application to amend Bray Park Weir within the Mid Tweed River water source is exempt from this prohibition.</p> <p>The replacement plan prohibits new in-river dams in the following water sources:</p> <ul style="list-style-type: none"> • Brays Creek • Burringbar River • Doon Doon • Lower Oxley • Pumpenbil Creek • Upper Oxley River • Upper Tweed River <p>An exemption is provided for all water sources if a dam is for town water supply purposes. Whilst the plans may permit this work, such works are still subject to significant assessment which would need to show that there would be no more than minimal harm to the environment before being approved.</p> <p>An amendment clause to alter releases from Clarrie Hall Dam remains in the plan to allow amendment if Bray Park Weir is modified.</p>

R4

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:

- a) Establish and publish fixed, numeric values for LTAAELs, ensuring they are based on best available information, including ecological requirements, an accurate estimate of basic landholder rights and climate change.
- b) Investigate the feasibility of setting separate LTAAELs based on high flow and low flow.
- c) 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

Closed

The definition of the LTAAEL in the replacement plan has been reviewed. It has been divided into a standard LTAAEL and higher-flow LTAAEL. The Standard LTAAEL is fixed at the volume of entitlements at the time of the replacement plan and basic landholder rights at the commencement of the first plan. There are very limited circumstances under which the standard LTAAEL can vary, and this is associated with licences being converted from the Water Act to Water Management Act 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.

The replacement plan also includes an amendment provision to establish extraction limits that have been determined based on a proportion of flow, should they be developed in the term of the plan.

Current licence entitlement in each water source has been updated. During this process some licences have been identified in the wrong water source. These errors will be corrected.

The new water metering rules are being rolled out in the plan area by December 2024. This information can be used to estimate annual take. The replacement plan includes an estimate of harvestable rights take as of 2022 and includes an estimate of harvestable rights uptake at the commencement of the first plan in the standard LTAAEL.

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). The 2021/22 action plan looks

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R7	<p>By 1 July 2023, to improve the management of environmental releases under the Tweed plan, the department should:</p> <ul style="list-style-type: none"> a) amend the Plan if necessary to allow changes to operational rules for Clarrie Hall Dam and Bray Park Weir based on the outcomes of investigations as part of the proposed augmentation of Clarrie Hall Dam, Bray Park Weir Tidal Protection Project (including fishway design) and Far North Coast Regional Water Strategy. b) implement revised environmental flow rules for Clarrie Hall Dam and Bray Park Weir (via fishway) based on best available information regarding the water requirements of key environmental assets, including, but not limited to native fish. 	<p>to improve and apply our understanding of climate variability and change.</p> <p>Closed</p> <p>The replacement plan includes an amendment for the system operational rules and environmental flows rules to be changed if an assessment of alternate rules indicates the change will have minimal harm on downstream environmental assets and improvements to water security for town water supply.</p>

The Natural Resources Commission recommended (February 2021)		Action taken to address NRC recommendation (April 2023)
<p>R9</p>	<p>By 1 July 2023, to reduce pressure on low flows, the department should:</p> <ul style="list-style-type: none"> a) Determine if amendments to plan provisions are required to encourage high flow conversions, where appropriate, by: <ul style="list-style-type: none"> i. determining a target for high flow conversions that could achieve a material benefit through destressing the low flow regime, but not compromising high flow dependent values ii. assessing barriers and drivers for uptake of high flow conversion b) Improve understanding of the environmental flow requirements of priority water dependent species in unregulated water sources, including low flow requirements – cease to pump rules should be reviewed based on this information and updated flow data c) Review the adequacy of existing river gauge network and whether additional gauges are required to reduce the number of water sources with a ‘no visible flow’ rule. 	<p>Closed</p> <p>The replacement plan allows high flow conversions to occur in four water sources. The assessment for high flow conversion for each water sources has been based on flow volumes and the existence of gauges within the water source.</p> <p>Access to high flows will need to be considered together with an increase in the volume of water that can be captured via harvestable rights. There are a number of reasons why high flow conversions have not been taken up which include reasons independent of the water sharing plan including water security and cost.</p> <p>Water sources where the construction of new gauges would be beneficial have been identified through the hydrometric network review for the coast. The Palmers Road gauge has been used to set access rules in the Tweed Plan. This is a new gauge which has over ten years of flow data which was not available when the first plan commenced.</p>

<p>R10</p>	<p>By 1 July 2023, to improve outcomes for native fish, the department should collaborate with DPI-Fisheries to:</p> <ul style="list-style-type: none"> a) Improve understanding of native fish populations and whether recruitment is occurring through targeted surveys of eastern freshwater cod (Richmond Plan area), southern purple-spotted gudgeon and Oxleyan pygmy perch (both plan areas) b) Update Plan provisions based on best available information, including fish flow requirements (including to achieve fish passage), key fish habitat mapping, new listings of threatened native fish and DPI-Fisheries' threatened species distribution mapping c) Include amendment provisions in the replacement plans allowing updates to plan rules based on new data for a broad range of water-dependent species. 	<p>Closed</p> <p>The department has completed the risk assessment for the 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 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>Decisions around flow classes and access rules consider the instream, downstream and Groundwater Dependent Ecosystem (GDE) values and impact on these values from extraction. Rules in the plan have considered flow requirements for fish species particularly fish migration requirements.</p> <p>The Department's Environment and Heritage Group (EHG) and DPI Fisheries sit on the interagency working group and provided feedback and recommendations in relation to access rules throughout the plan area.</p> <p>An amendment provision is not required to update the plan if it is in the public interest to do so. Work has commenced reviewing known environmental watering requirements for coastal water dependent species.</p>
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The Natural Resources Commission recommended (February 2021)		Action taken to address NRC recommendation (April 2023)
R11	<p>By 1 July 2023, to improve mitigation of acid sulfate soil risks, the department should:</p> <ul style="list-style-type: none"> a) Include a definition and provisions to manage the risk of disturbance of acid sulfate soils, consistent with those in the Water Sharing Plan for the Macleay Unregulated and Alluvial Water Sources 2016 b) Ensure Plans cross-reference online Acid Sulfate Soil Risk Maps so water users can identify at risk areas. 	<p>Closed</p> <p>The replacement plan includes provisions aimed at minimising future disturbance of acid sulphate soils by requiring minimum setback distances for new bores from identified potential acid sulphate soil risk locations that are identified on a risk map published on the department’s website.</p>
R12	<p>By 1 July 2023, to improve the management of connectivity, the department should:</p> <ul style="list-style-type: none"> a) Draw on best available information and conduct relevant studies to identify highly connected systems, including but not limited to the relationship between Alstonville Plateau groundwater and base flow in connected waterways in the Richmond Plan area 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 as highly connected in 12(a) and stage access rules for existing bores c) Include comprehensive definitions for surface-groundwater connectivity in the plan dictionaries. 	<p>Closed</p> <p>No further information is available on surface water and groundwater connectivity in the area.</p> <p>Water contained in alluvial sediments that are highly connected to the surface water is managed the same way as the surface water in the area in recognition that this water is essentially a single resource.</p>

The Natural Resources Commission recommended (February 2021)		Action taken to address NRC recommendation (April 2023)
<p>R13</p>	<p>By 1 July 2023, to support economic outcomes, while protecting high-value aquatic ecosystems, the department should use best available evidence to review trade arrangements under the plans, including:</p> <ul style="list-style-type: none"> a) Considering latest HEVAE mapping and risk assessments b) Assessing the full range of economic benefits and impacts of water extraction and the importance of river health to industries and supporting a range of ecosystem services such as tourism, recreation and community activities c) Reviewing and addressing trade barriers, such as mapping errors (noting that environmental outcomes must be maintained) d) Working with WaterNSW to address ambiguity in trade rules and improve administrative arrangements to enable timely trades e) Amending plan rules, where necessary, to address any changes to classifications. 	<p>Closed</p> <p>The replacement plan dealings provisions were developed in consideration of HEVAE mapping and risk assessments.</p> <p>Socio economic benefits of extraction have been considered alongside environmental requirements when reviewing rules in the water sharing plan.</p> <p>Trade provisions reflect the ecological risk assessment results and updated flow data.</p>

The Natural Resources Commission recommended (February 2021)		Action taken to address NRC recommendation (April 2023)
<p>R14</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 setback distances for work near identified GDEs and standardise them based on the NSW Aquifer Interference Policy 2012 and more stringent setback distances in the Water Sharing Plan for the North Coast Fractured and Porous Rock Groundwater d) Clarify the extent to which Tuckean Swamp is managed by the Richmond Plan and ensure provisions reflect the requirements in the <i>Water Sharing Plan for the North Coast Fractured and Porous Rock Groundwater Sources 2016</i>, where supported by best available information. 	<p>Closed</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, “Methods for the identification of high probability groundwater dependant vegetation ecosystems” (PDF 8.6MB). 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 reflect 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 Tweed River Area Coastal Floodplain Alluvial Groundwater Source has been included in the plan and manages alluvial groundwater that is less connected to surface water as a single resource.</p> <p>Groundwater extracted from alluvial deposits (as opposed to coastal sands) are managed under the Tweed plan. New groundwater works in alluvium would be subject to setback distances GDEs identified on the GDE plan map.</p>

The Natural Resources Commission recommended (February 2021)		Action taken to address NRC recommendation (April 2023)
R15	Amend the Tweed Plan to reflect all current native title determinations and claimants and Indigenous Land Use Agreement holders comprehensively and reflect this consistently across both Plans.	<p>Closed</p> <p>The replacement plan recognises and references the Native Title determination for the Githabul Nation Aboriginal Corporation that applies to the plan area.</p>
R16	Reserve unallocated water for Aboriginal specific licences or other Aboriginal water access options, before being offered to the market on commercial terms.	<p>In progress – on track</p> <p>The plan identifies that a significant portion (725 ML) of unallocated water in the new Tweed River Area Coastal floodplain alluvial water source can be made available as Aboriginal community development access licences.</p> <p>Any mechanism to exclusively reserve unallocated water for Aboriginal water use is a state-wide policy position and would be outside the scope of a single water sharing plan. This issue will be considered as part of the Aboriginal Water Strategy.</p> <p>Water requirements for any native title determinations have been included in the water sharing plan.</p>

R17

Finalise an NSW Aboriginal Water Strategy in 2021 to provide consistent, transparent guidelines and resourcing for Aboriginal water management across NSW, comprising the following at a minimum:

- a) Improve recognition of native title by including a common provision to undertake preliminary amendments to a plan within six months of a native title determination or other agreement that includes water allocation.
- b) Allow additional time to undertake detailed engagement with Traditional Owners, make water allocations and final plan amendments; considering native title claims proactively as part of water sharing planning.
- c) Identify Aboriginal water values and uses, objectives and outcomes by undertaking extensive engagement with Aboriginal stakeholders in all plan areas; prioritising allocations to protect values; adopting cultural landscape-scale principles; integrating identified values into ongoing water planning and management.

Co-design Aboriginal specific licences or other water access options with key Aboriginal stakeholders that meet identified needs for a range of cultural, environmental, social and economic uses.

In progress – on track

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 progressing the development of the Aboriginal Water Strategy due for delivery by December 2024. The department has progressed recruitment of a Regional Engagement Team who will help progress work in relation to Native Title, Aboriginal engagement and co design outcomes.

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		<p>The department will also be establishing Regional Aboriginal Water Committees across the State in 2023. These committee will serve as the core engagement mechanism for the co - design of the Aboriginal Water Strategy and the progression of other water plans and initiatives.</p> <p>A separate indigenous consultation meeting was organised as part of the draft plan public exhibition.</p>
<p>R18</p>	<p>By 1 July 2023, to improve transparency and support the achievement of outcomes in line with the water management principles and priorities of the Act, the department should strengthen MER, including:</p> <ul style="list-style-type: none"> a) Completing studies required to improve the knowledge base and for adaptive management b) Developing Plan-specific publicly available MER frameworks consistent with the coastal and state-wide guidelines. The framework should include linked and SMART objectives, strategies and performance indicators, define roles and responsibilities, set timely public reporting requirements and include adaptive management processes. 	<p>In progress – on track</p> <p>The department is progressing development and implementation of the NSW Water Sharing Plan Evaluation Program.</p> <p>The department will commence scoping monitoring, evaluation and reporting requirements for water sharing plans that have recently been replaced in 2023. The first Annual Implementation Report will be released in the first quarter of 2023-24.</p>

Table 2. The department response to NRC review suggested actions

The Natural Resources Commission recommended (February 2021)		Action taken against NRC recommendation (February 2023)
SA A	Finalise the reasonable use guidelines for domestic and stock use by 1 July 2022 and include the agreed standards as part of the replacement plans.	<p>In progress – on track</p> <p>A project is underway to review the need, and options for, regulation of take under domestic and stock basic landholder rights, following an allocation of New Policy Proposals funding. This project is aimed at determining the most appropriate framework for managing take under these rights, according to the level of risk, and may or may not result in reasonable use guidelines. The project delivery has been deferred by a delay in the Minister's approval to proceed with consultation in 2022 and staffing issues.</p>
SA B	Support complementary measures such as riparian rehabilitation, streambank stabilisation and improved fish passage. Ensure these measures are considered in an integrated way with the plans.	<p>No action required</p> <p>Out of scope of water sharing plan</p>
SA G	Continue to develop state-wide evaluation framework and monitoring plan, considering and addressing key gaps and prioritising MER activities based on values and risk. The framework, monitoring plans and reporting should be publicly available to improve transparency.	<p>In progress – on track</p> <p>The department is progressing development and implementation of the NSW Water Sharing Plan Evaluation Program.</p> <p>The department will commence scoping monitoring, evaluation and reporting requirements for water sharing plans that have recently been replaced in 2023. The first Annual Implementation Report will be released in the first quarter of 2023-24.</p>

The Natural Resources Commission recommended (February 2021)		Action taken against NRC recommendation (February 2023)
SA H	As part of the plan replacement in 2023, assess the residual risk to implementing plan provisions (including LTAAELs and AWDs) from users that are not captured under the NSW Government’s metering framework.	No action required 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.
SA I	The department should adopt state-wide processes that support the plan remake and implementation by: <ul style="list-style-type: none"> a) Enhancing communication of water sharing plans through active, simple, and consistent language and modes of communication b) Improving implementation using clear and consistent governance, roles and responsibilities, and timelines. 	Closed The replacement water sharing plan as well as the documents supporting the draft plan, public exhibition and the final plan have been improved in terms of providing consistent, easier to understand language.
SA J	As part of the plan replacement, the department should develop well-evidenced and resourced processes for stakeholder engagement in the plan area. This should be part of a strengthened state-wide stakeholder engagement strategy.	Closed A stakeholder engagement plan was developed and implemented for the replacement water sharing plan.

SA K

By 1 July 2023, the department should adopt integrated catchment management approaches that support the plans' replacement and implementation.

No action required

Water sharing plans are developed in accordance with the requirements of the WM Act and cannot direct catchment actions not related to water sharing.

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.

The Government will work to better integrate strategic land use planning with water management frameworks and outcomes. Taking steps to:

- 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
- develop new planning policies, if required, to integrate land use and water cycle management decisions
- 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
- improve access to information about water availability to support development

The Natural Resources Commission recommended (February 2021)	Action taken against NRC recommendation (February 2023)
	<ul style="list-style-type: none">• examine opportunities for information on high value water-dependent ecosystems and cultural values to be considered in land use planning decision.