

# A new water sharing plan for the Bega–Brogo area

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A summary of proposed changes for the Bega–Brogo system included in the draft *Water Sharing Plan for the Bega River Area Regulated, Unregulated and Alluvial Water Sources 2023*

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Water sharing plans are the primary legal framework for managing water access and sharing in NSW. The plans are valid for 10 years from their start date.

The Natural Resources Commission (NRC) formally reviews a plan near the end of its 10-year term. The review identifies any changes necessary to deliver better outcomes for all water users, including the environment.

Under the *Water Management Act 2000*, the minister may, on the recommendation of the NRC, extend a water sharing plan for another 10 years or replace it with a changed plan.

In 2021, the NRC completed its review of the South Coast water sharing plans and recommended their replacement. The replacement plan is due by 1 July 2023. A copy of the NRC report is available from the [Publications page \(current work\) on the NRC website](#).

This fact sheet summarises the proposed changes for the Bega–Brogo area, which range from new and changed water sharing rules to administrative changes.

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## Merging of 2 water sharing plans

As part of the replacement of water sharing plans, the NSW Department of Planning and Environment takes the opportunity to consolidate plans where appropriate. We have combined the Bega and Brogo and Murrumbidgee–Wallaga plans as they have common communities, industries and local government.

The department has drafted a new water sharing plan – the *Water Sharing Plan for the Bega River Area Regulated, Unregulated and Alluvial Water Sources 2023*. When finalised, this plan will replace the current water sharing plans for:

- Bega and Brogo Rivers Area Regulated, Unregulated and Alluvial Water Sources 2011
- Murrumbidgee–Wallaga Area Unregulated and Alluvial Water Sources 2010.

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## Water source boundaries

The Regulated River Order for the Bega and Brogo Regulated Rivers 2018 expanded the definition of the regulated river to include the Brogo Dam storage. We have changed the boundaries of the Bega–Brogo Regulated Rivers Water Source accordingly to include this area, which previously sat within the Upper Brogo Water Source.

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## Access rules in the Upper Bega–Bemboka Rivers

In the Upper Bega–Bemboka Rivers Water Source, the current water sharing plan has a ‘dual’ cease-to-pump rule. Licence holders who have carried out accreditable on-ground riparian improvement works can access low-flows down to a cease-to-pump level of 2 ML/day (the 97th percentile flow – the lowest 3% of flows). Licence holders who have not completed such works have a cease-to-pump level at 5 ML/day (the 90th percentile flow – the lowest 10% of flows).

An ecological risk assessment showed there is a high risk that there will not be enough water for freshwater riverine ecosystems in Upper Bega–Bemboka water source at low-flows. This is despite cease-to-pump rules already being in place. This suggests that the current cease-to-pump rules may not adequately protect low-flows.

Research shows that when flows fall below the 95th percentile flow, a significant amount of the riverine habitat dries out. If these low-flows persist, there is a high risk we will lose riverine ecosystems and have less variety of plants and animals.

Many licence holders can extract flows down to 2 ML/day, and then more extraction is permitted below that level for basic landholder rights or health and hygiene purposes. Because of this, low-flows in the Upper Bega–Bemboka Rivers water source are not protected enough now.

In the draft water sharing plan, we propose to increase the cease-to-pump level for all licence holders to 5 ML/day referenced to the gauge number 219032 (Bega River at Kanoona). Extraction below this level can still happen for basic landholder rights or health and hygiene purposes. This change aims to balance ecological and economic needs.

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## Trade rules

Rules governing trade have changed for some water sources in the Bega–Brogo area. Refer to the water source Report Cards for more details.

In the draft plan, we continue to allow trade within each water source. It is still banned between water sources that are not hydrologically connected (that is, water sources that do not drain into each other).

The current Bega–Brogo area plan does not allow any trade between water sources. The draft plan proposes to allow trade between 7 water sources into higher (B-Class and C-Class) flows up to a maximum volume. This is based on ensuring the risk remains low that increased extraction in the higher flow classes will affect riverine ecosystems.

Table 1 shows the trade we propose permitting.

Table 1. Trading we propose to allow

Water source	Flow class	Maximum volume	Added conditions
Lower Bega–Lower Brogo Rivers Tributaries	Into B-Class	616 ML	n/a
Sandy Creek	Into B-Class	308 ML	n/a
Candelo Creek	Into B-Class	308 ML	n/a
Wolumla Creek	Into B-Class	308 ML	n/a
Upper Bega–Bemboka Rivers Tributaries	Into B-Class	616 ML	The source of trade can only be from the Upper Bega–Bemboka Rivers Water Source.
Mid Bega River Tributaries	Into B-Class	1,430 ML	The source of trade can only be from Mid Bega River Sands Water Source.
Tantawangalo Creek (Lower Zone)	Into C-Class	770 ML	n/a

## High-flow conversion rules

Rules governing high-flow conversions have changed for some water sources in the Bega–Brogo area. Refer to the water source Report Cards for more details.

In the Bega–Brogo area, the current plan allows licences to be converted to high-flow ones in 9 water sources. This enabled licence holders to apply to convert all or part of their licensed volume on a 3:1 basis (that is, 10 ML would become 30 ML), on the condition that they only extracted water at high-flows. Licence holders have not applied for high-flow conversion over the past 11 years.

Table 2 shows the 3 areas where we propose to continue allowing conversion to a high-flow licence.

Table 2. Areas where we propose to continue allowing high-flow conversions

Area	Maximum volume	Volume of entitlement the licence holder can convert
Tantawangalo Creek (Lower Management Zone)	770 ML	257 ML
Mid Bega River Sands	1,760 ML	587 ML
Upper Bega–Bemboka Rivers	1,760 ML	587 ML

We propose that conversion will still be on a 3:1 basis and the extraction will only be from high (C-Class) flows. Higher ratios than 3:1 cannot be supported without increasing the risk of affecting higher flows. This rule is specifically to encourage licence holders in these areas to move their extraction out of highly stressed low-flows.

We propose to ban conversion to high-flow licences in the following 6 water sources:

- Lower Bega–Lower Brogo River Tributaries
- Upper Bega–Bemboka River Tributaries
- Sandy Creek
- Candelo Creek
- Wolumla Creek
- Mid Bega River Tributaries.

This decision is driven by updated information showing there is:

- not enough water available in the water source at high-flows (that is, they are small, low yielding catchments), or
- low risk to riverine ecosystems at low-flows (that is, there is no urgency to encourage licence holders to move extraction out of low-flows), or
- a medium or high risk to riverine ecosystems at higher flows (that is, if we allow more extraction at high-flows, it may cause stress at that flow level).

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## Cochrane Dam drought reserve

- The department will clarify responsibilities for the operation and management of the drought reserve.
- We propose removing the carryover provision that applies to the drought reserve account and allows unused drought reserve allocation to be carried forward into the next water years account.
- We will update rules for the conditions that trigger the drought reserve to reflect current drought declaration procedures.

## Extraction limit for Bemboka town water

We propose removing the 0.1 ML/day extraction limit currently imposed on Bega Valley Shire Council for the Bemboka town water supply when releases are being made from the drought reserve. Council has advised us that it cannot comply with this condition.

In the draft plan, we propose instead to impose a limit of 0.2 ML/day on extraction for Bemboka town water from the Upper Bega–Bemboka Rivers Water Sources at all times. As a main purpose of the drought reserve is to ensure supply for Bemboka, the department considers it reasonable to allow this level of extraction when the drought reserve is in operation.

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## Operation of Cochrane Dam

Releases from Cochrane Dam contribute to the flows of the Upper Bega–Bemboka water sources, particularly during low rainfall periods. While there are no proposed changes to the operational rules for Cochrane Dam in the draft water sharing plan, the department wants to discuss opportunities for mutually beneficial changes with the owners. These can be considered in the final draft of the water sharing plan.

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## Operation of Brogo Dam

In the current water sharing plan, the minimum release rules from Brogo Dam only apply when the water level in the dam is above 50% of the storage capacity. This is out of step with other similar storages in NSW which require minimum release flows for a longer period.

We propose in the draft plan to include an improved minimum release rule from Brogo Dam. This would extend the time in which minimum releases must be made from when Brogo Dam is at 50% storage capacity to when it is 20% capacity.

This rule, while new, is similar to the current release regime of Brogo Dam, so effects on storage levels over time will be minor.

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## Rules for supplementary and uncontrolled flows

The current water sharing plan has an access rule that limits the percentage of flows that can be taken during uncontrolled flow and supplementary flow events to 50%. We propose removing this rule for the replacement plan.

It is not possible to apply this rule before the uncontrolled flow or supplementary flow event. In the regulated Bega and Brogo system, such events may last for months at a time. Further, the volume of water extracted during uncontrolled or supplementary events is small compared to the scale of the events and well below the rule's target of 50%.

We do not propose any other changes to access rules for supplementary or uncontrolled flows.

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## Water ordering required for regulated river users

In line with rules for other regulated systems throughout the state, water users in the Bega and Brogo Regulated River must now order water. More information on water ordering can be found at <https://www.waternsw.com.au/customer-service/ordering-trading-and-pricing/ordering>

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## Aboriginal community development licences

Rules governing Aboriginal community development licences have changed for some water sources in the Bega–Brogo area. Refer to the water source Report Cards for more details.

Table 3 shows the changes we propose in the draft plan for Aboriginal community development licences in these water sources and the specified flow classes.

Table 3. Changes we propose for Aboriginal community development licences

Water source	Flow class	Change proposed in draft plan
Upper Bega–Bemboka Rivers	B-Class	No longer allow applications for Aboriginal community development licences (ACDLs) in this water source and flow class
Mid Bega Sands	C-Class	No longer allow applications for ACDLs in this water source and flow class
Tantawangalo Creek (Lower Management Zone)	B-Class	No longer allow applications for ACDLs in this management zone and flow class
Tantawangalo Creek (Lower Management Zone)	C-Class	Allow applications for ACDLs in this management zone and flow class
Lower Bega–Lower Brogo Rivers Tributaries	B-Class	No change – continue to allow applications for ACDLs
Mid Bega River Tributaries	B-Class	Allow applications for ACDLs in this water source and flow class
Sandy Creek	B-Class	Allow applications for ACDLs in this water source and flow class
Candelo Creek	B-Class	Allow applications for ACDLs in this water source and flow class
Wolumla Creek	B-Class	Allow applications for ACDLs in this water source and flow class
Upper Bega–Bemboka Rivers Tributaries	B-Class	Allow applications for ACDLs in this water source and flow class

The total volume of entitlement issues through applications for Aboriginal community development licences is limited to 500 ML.

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## Additional water source

The proposed plan includes a new water source – the Bega River Area Coastal Floodplain Alluvial Groundwater Water Source. We have changed the plan map to include this water source.

This new water source includes the majority of the alluvial groundwater below the tidal limit within the water sharing plan boundary. We propose a long-term average annual extraction limit of 429 megalitres for this water source. Licence shares in this water source can be granted through a controlled allocation process.

Trading within the water source is permitted, depending on our assessment of how it affects other water users and the environment.

Trading into the water source will be prohibited.

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## New definition for long-term average annual extraction limits

The long-term average annual extraction limit (LTAAEL) determines the maximum amount of water that can be extracted from a water source over the long term.

In response to recommendations from the NRC, we have split the LTAAEL for all water sources in the Bega–Brogo area – except for the Bega and Brogo Regulated Rivers Water Source and the Bega River Area River Coastal Floodplain Alluvial Groundwater Source – into two 2 components.

- The **standard LTAAEL** applies to take from all flows (except take that can only be from high-flows, such a high-flow licences) and includes all basic landholder rights extraction. This is a fixed volume.
- The **higher flow LTAAEL** applies to extraction that can only be from high-flows. This volume can vary as we convert licences to high-flows or grant them in high-flows such as licences for initial fills of dams.

Including basic landholder rights in the standard LTAAEL and fixing its volume allows us to manage any growth in water extraction. If extraction increases to more than 5% above the standard LTAAEL (from licensed take or basic landholder rights take), then we will announce a reduced available water determination to bring extractions back down to the extraction limit. The reduced determination can only be applied to licensed water users.

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## Updated groundwater-dependent ecosystem map

Recent work by the department has identified more high-probability, high-priority groundwater-dependent ecosystems.

The map in the draft plan includes the additional groundwater-dependent ecosystems. We refer to these ecosystems as groundwater-dependent vegetation ecosystems.

The draft plan includes rules that restrict or prohibit new water supply works (bores) within specified distances of the groundwater-dependent ecosystems.

## Water supply works approvals

Since the start of the 2011 water sharing plan, we have identified new information.

- **Coastal Wetlands** – Coastal wetlands have been identified in the Bega–Brogo area of the Coastal Wetlands and Littoral Rainforest Area Map of the State Environmental Planning Policy (Resilience and Hazards) 2021. These wetlands are in the following water sources:
  - Lower Bega–Lower Brogo Rivers Tributaries Water Source
  - Bega River Estuary and Tributaries (Lower Estuary Management Zone).
- **Risk assessment** – We have completed a risk assessment for the water sources in the water sharing plan area. In the assessment, we consider the ecological values in the area and the likelihood that extraction of water will affect these. We combine ecological value and likelihood to create a risk rating for each water source. We have identified that these water sources have high ecological value:
  - Upper Bega–Bemboka Rivers
  - Upper Bega–Bemboka Rivers Tributaries
  - Sandy Creek
  - Candelo Creek
  - Tantawangalo Creek
  - Mid Bega River Tributaries
  - Mid Bega River Sands.
- We updated risk maps for **potential acid sulfate soil** in 2011.
- The *Marine Estate Management Act 2014* began operating since the last water sharing plan was developed. This Act requires the Minister for Lands and Water to consider the **NSW Marine Estate Management Strategy** when managing water sharing.

As a result of this new information, the replacement water sharing plan proposes the following changes to rules for water supply works approvals:

- prohibiting construction or amendment of in-river dams in water sources we have identified as having high ecological value and that currently have the prohibition in place, specifically:
  - Upper Bega–Bemboka Rivers
  - Sandy Creek
  - Candelo Creek
  - Tantawangalo Creek
  - Mid Bega River
  - Mid Bega River Sandsbut excepting the:
  - Mid Bega River Tributaries
  - Upper Bega–Bemboka Rivers Tributaries (we made the exception to help trade out of low-flows from adjacent downstream water sources).

- prohibiting construction or amendment of water supply work approvals, except for the exercise of basic landholder rights, in areas where there is currently no water development, specifically in the:
  - Upper Brogo Water Source
  - Upper Tantawangalo Creek Management Zone.
- prohibiting construction or amendment of water supply work approvals where there will be more than minimal impact on Coastal SEPP (State Environmental Planning Policy) wetlands in water sources where they exist
- prohibiting groundwater works on land classified as having a high probability of containing acid sulfate soils.

We have also changed the rule for take from (natural) off-river pools. Previously, take was not permitted unless the pool was at or above 100% capacity. The draft plan proposes that we will now permit take when capacity is at 50% and higher, unless flows are in the very low-flow class.

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## Distance rules for groundwater bores in alluvial aquifers

In the draft plan, we propose new rules to govern the minimum distance between groundwater bores and certain sites or areas. The plan proposes that water supply works must not be granted or amended within an area classed as having a high probability of containing acid sulfate soils, based on the Acid Sulfate Soil Risk Map the department maintains.

Similarly, we propose new rules governing the minimum distance between groundwater bores and contamination sites or groundwater-dependent areas. New or amended water supply works will not be granted:

- within 500 metres of a contamination site identified by the plan
- within 250 metres from the edge of a contamination plume and an onsite sewage system
- between 250 metres and 500 metres of the edge of a contamination plume where drawdown will occur within 250 metres of the edge of the contamination plume
- 100 metres from a groundwater-dependent, culturally significant site if the bore is for basic landholder rights, and 200 metres for all other bores
- 100 metres from a high-priority, groundwater-dependent ecosystem identified on the groundwater-dependent ecosystem map for basic landholder rights bores or 200 metres for all other bores.

The new plan proposes to change distance rules for new bores near existing bores on neighbouring properties. Distance restrictions in the 2011 plan were smaller than other coastal water sharing plans. To prevent effects on bores on neighbouring properties, we will apply these standard distances:

- 200 metres from a bore on a neighbouring property (whether it is used solely for basic landholder rights or licensed extraction)
- 100 metres from the boundary of another property, unless the licence holder of the bore on the neighbouring property has given written consent.

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## Estimated water requirements for basic landholder rights and licensed take

We propose to update the estimated water requirements of basic landholder rights to take into consideration recent data sets for urban areas, number of dwellings and land use. We also propose to update the total volumes or unit shares specified in the share components of all access licences to reflect current information. The draft plan outlines estimates of these volumes at the time of public exhibition.

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## Effects of increased harvestable rights

In May 2022, harvestable rights for coastal catchments in NSW increased from 10% of rainfall run-off to 30%, dependent on a catchment-by-catchment assessment.

This has the potential to reduce flows that reach rivers. To protect instream and downstream ecological values and other water users who rely on river flows, we propose including an amendment provision in the plans. This would allow us to change the plans if there is significant uptake of additional harvestable rights.

The proposed amendment provision requires the department to monitor the uptake of harvestable rights by year 3 of the plan. If uptake has grown to above 10% of rainfall run-off, we may review access and trade rules for the water sharing plan.

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## More information

To read the draft water sharing plan and other fact sheets, visit [the Water pages of the department's website](#).