

Translucent releases from Windamere Dam

This document answers frequently asked questions regarding why translucent releases are being made from Windamere Dam to the Cudgegong River.

Why is water being released from Windamere Dam?

The environmental flow rules for Windamere Dam are specified in the *Water Sharing Plan for the Macquarie Cudgegong Regulated Rivers Water Source 2016*.

These rules are primarily based on a translucency rule concept where fixed inflow and dam storage triggers determine when to release, in part or in full, the inflows to Windamere Dam.

What are the triggers for environmental releases to be made from Windamere Dam?

The current rules specify environmental releases must be made from Windamere Dam when all of the following circumstances are occurring:

- The total storage inflows, plus tributary inflows downstream of the Dam, are capable of producing a flow at Rocky Water Hole of at least 150 megalitres per day (ML/day) for two days or more.
- The storage level of Windamere Dam is above 110 gigalitres (GL).
- The total annual volume of water released has not exceeded 10 GL.
- Windamere Dam is not spilling.

Are releases from Windamere Dam impacting downstream flooding?

Translucent releases from Windamere Dam are not contributing significantly to the downstream flood risk.

What environmental benefit are these releases providing?

Dams cause significant impacts on the natural flow regime and ecology of rivers and streams. Translucency rules are put in place to mimic some of the flows that would naturally have occurred, to mitigate the environmental impacts of a dam and create some flow variability in the river.

The current translucency rule was designed to benefit the ecology of Cudgegong River and its riparian zone and floodplain. These higher flows are intended to remove biofilm (slimes and algae) from the river cobbles and remove excessive sediment and vegetation from the river channel. It is a river ecology 're-set' rule that benefits the structure and function of the river for macroinvertebrates, instream and riparian vegetation, and larger fauna such as yabbies, platypus, fish and turtles.

Also, several of our iconic native fish species breed as a result of high flows and increased water temperatures. This release provides a good opportunity for that to happen.

Who makes the decision to release water?

The triggers for the translucent rules are specified in the water sharing plan. If the triggers are met, WaterNSW must make a release in accordance with the rules in the plan.

Will this water be spilled from Burrendong Dam?

Once the environmental water releases from Windamere Dam enter Burrendong Dam, the water is re-regulated and managed according to the water sharing rules in the plan, including rules that specify dam operation during floods and spills.

The Macquarie Flood Mitigation Zone Reference Panel provides advice to WaterNSW on the release of water from the flood mitigation zones of Burrendong Dam during flood and airspace operations.

Why can't translucent releases be suspended?

The Minister for Water can consider suspending the translucent releases in limited circumstances, where the releases pose a significant risk to flooding. This decision is informed by advice from WaterNSW and DPE Water. The most recent advice provided by WaterNSW did not signal a significant risk to dam infrastructure, life or property from flooding. DPE Water will continue to monitor the situation and seek regular advice from WaterNSW on any potential flood risks.

Have translucent releases been suspended in the past?

In December 2010 and March 2012, the translucency flow rule from Windamere Dam was suspended, as Burrendong Dam was in severe flood. The suspension of releases was recommended by the Environmental Flows Reference Group and the Macquarie Flood Mitigation Zone Reference Panel, which was convened by WaterNSW with key water user representatives in the valley. The suspension of the rule was approved by the department at that time.

Releases were again suspended in November 2021 to reduce the risk of flooding downstream of Burrendong Dam, which was in flood operation. The rule was reinstated in February 2022 when the risk of flooding had subsided.

Why wasn't I given enough notice about the releases being made?

Following a rain event, if translucent releases are triggered at the dam, WaterNSW will send an operational update via its Early Warning Network (EWN) platform advising of the planned releases, including start time and the release rate. You can register for the alerts here:

www1.ewn.com.au/waternsw/register.aspx

What changes are proposed to the translucent release rules?

The current translucent rules were reviewed during the development of the Macquarie Castlereagh Water Resource Plan. As a result of this review, DPE Water have recommended changing the environmental flow rules to establish an Environmental Water Allowance (EWA) for the Cudgegong River.

The water sharing plan specifies a number of conditions regarding the operation of the EWA. The NSW Environmental Water Manager, in collaboration with the local Environmental Water Advisory

Group, will make decisions about when releases should occur. The process is a similar to that used to manage the EWA for the Macquarie River.

The proposed amendments to the *Water Sharing Plan for the Macquarie Cudgegong Regulated River Water Source 2016* are currently being considered by both the Minister for Water and the Minister for the Environment for approval.

When will the new EWA for the Cudgegong River come into effect?

The amendments proposed to the water sharing plan do not just include changes to how environmental water is managed from Windamere Dam. The amendments also include additional rules for floodplain harvesting.

New environmental water provisions which establish an EWA for the Cudgegong River must come into effect on 1 July, at the start of a water year. This is because crediting the EWA is linked to Available Water Determination (AWD) announcements for General Security licences, which are announced at the start of each water year and then subsequently throughout the year as additional water becomes available. If the EWA came into effect after 1 July, it would not be factored into the start of year AWD as there would be no rules in the water sharing plan specifying water must be allocated to the EWA. This would likely result in the environment receiving less water than intended for that water year.

Therefore, the new rules which replace the translucent releases with an EWA for Windamere Dam will commence at the start of the water year after the plan is amended. This means if the plan is amended during the 2022/23 water year, the EWA will be established on 1 July 2023. Until such time, the translucent release rules for Windamere Dam will continue to operate when the triggers specified in the water sharing plan are met.

Doesn't releasing water onto already saturated/flooded ecosystems cause more environmental damage?

Freshes and floods are an important natural feature of our river systems. They help provide movement and spawning opportunities for native fish and platypus. The organic material washed into the river provides food for microscopic organisms, which in turn provide food for fish. Freshes and flood-flows also provide opportunities for groundwater systems to recharge.

What happened to the proposal to increase the minimum volume to be left in Windamere Dam as part of the bulk water transfer (BWT) protocol?

The Bulk Water Transfer (BWT) protocol was developed in 2005 as required by the water sharing plan. The protocol required Windamere Dam to be left holding 70,000 megalitres at the end of the Bulk Water Transfer (BWT) to ensure sufficient reserves are set aside in Windamere Dam to provide Cudgegong regulated river requirements through the drought of record equivalent prior to the commencement of the 2004 water sharing plan.

WaterNSW is obliged by their Work Approval to conduct a review of the protocol every 5 years.

A review of the BWT protocol was undertaken between 2011 and 2015 in consultation with a sub-committee of the Macquarie Cudgegong Customer Service Committee that included representation

from the Cudgegong community. The primary issue addressed by the sub-committee was the size of the storage reserve required in Windamere Dam to provide drought security for Cudgegong Valley water needs. The sub-committee agreed to retain the reserve of 70,000 megalitres, but reduce the maximum demand from 15,000 megalitres per year to 10,000 megalitres per year. This reserve is sufficient to secure the storage through a repeat of the millennium drought, which extended for eight years and was more severe than anything experienced prior to 2004.

Are translucent environmental releases just another way to do a BWT from Windamere Dam ?

BWTs are generally required during extreme dry and drought conditions. Windamere Dam provides a secure water supply for the Cudgegong Valley, and the dam and its catchment are also large enough to secure some water for customers in the Macquarie Valley. Under the conditions of the Macquarie-Cudgegong water sharing plan, transfers of some water from Windamere to Burrendong occur when Burrendong's storage levels drop, to ensure reliability of supply to all customers. Whereas, translucent environmental water releases from Windamere Dam are 'hard wired' into the water sharing plan, which aims to address environmental objectives in the Cudgegong River, and are generally delivered in medium to wet years.