Update: temporary water restrictions on river and overland flows in the northern Basin

Why we are beginning to lift temporary restrictions on access and the benefits they have achieved

Overview

As a result of the restrictions in the Northern Basin, the long-awaited flows to the northern parts of NSW are now expected to meet critical needs along the full length of the Barwon-Darling River and the target of 60-70GL in Lake Wetherell. This information sheet explains what temporary restrictions still apply, where some pumping is being permitted, and the benefits that the restrictions have provided.

Flows into the Barwon-Darling will reach Lake Wetherell in sufficient volumes to achieve full connection to the end of the Lower Darling River and to meet critical needs. Therefore, we are progressively allowing some access upstream as the flow pulse moves down.

Permitting access

Access has been given to some upstream parts of the northern river valleys, as those flows are no longer required to meet target volumes in Lake Wetherell. Where access is permitted, water can only be taken in accordance with licence conditions and rules in the relevant water sharing plans.

Unregulated rivers

Access for unregulated river access licences is now permitted in many of the northern unregulated river valleys in accordance with rules in the relevant water sharing plan and licence conditions. This includes all unregulated river water sources in the NSW Border, Gwydir, Namoi, Castlereagh and Macquarie valleys. Unregulated river access licence holders upstream of Bathurst are still subject to existing restrictions to protect town water supplies.

Access is still restricted in the Barwon-Darling River itself and the NSW Intersecting Streams to ensure the passage of flows that have already been protected through the tributaries, and those likely to arrive from Queensland will meet the flow target for Lake Wetherell.

Access in the Barwon Darling will be lifted progressively once we are certain that it will not impact on the target volume for Lake Wetherell.

Regulated rivers

Access to all high priority access licences - local water utilities, domestic and stock, high security - is permitted in accordance the rules in the relevant water sharing plan, water allocation announcements and licence conditions.

Note that licence categories in some valleys will remain at less than full allocation until the situation improves further, and we receive further inflows to storages. Delivery of remaining water in general security accounts may be considered prior to 28 February 2020 by access to flows in transit along the regulated rivers, not via release from storage.

Volumes in regulated river storages are still low and need further sustained inflows before normal allocations and operations for general security licence holders can be confidently resumed in all valleys. We are continuing to monitor the situation on a daily basis.

Any further changes to account restrictions and water allocations will be considered in the coming weeks as water availability in the major storages is reassessed. For the latest information on water availability conditions, subscribe to our (typically monthly) water allocation statements: https://www.industry.nsw.gov.au/water/allocations-availability/allocations/statements

Any new flow events that trigger supplementary access or uncontrolled flow access will be considered on a case-by-case basis, requiring approval by the Department and announcement by WaterNSW.

Designated Floodplains

The restrictions on floodplain harvesting to date have been crucial to maximising the volume of water on the floodplain that returns to rivers and creeks and supports the downstream objectives of this order. The latest forecast flows to Menindee do not consider any further contributions from the floodplains in the Gwydir, Upper and Lower Namoi, NSW Border Rivers and Macquarie valleys. On this basis, floodplain harvesting access is now allowed for the designated floodplains in these four valleys.

Floodplain harvesting will remain restricted in the designated floodplain of the Barwon-Darling valley to protect current and forecast flows as they make their way through the Barwon-Darling river. The situation will be reviewed regularly to determine when floodplain harvesting access in various river sections of the Barwon-Darling can be lifted.

Once overland flow on a property has ceased, any water remaining in supply channels and surge areas is considered ‘passive take’ and this water can be moved into on-farm storage. The decision to not restrict ‘passive take’ in these orders recognises that water that remains in on-farm irrigation infrastructure after overland flow has ceased will no longer contribute to river flows. We encourage landholders to keep detailed records of any ‘passive take’ that is transferred to on farm storages.

Why are we beginning to lift temporary restrictions?

Temporary water restrictions, made under section 324 of the *Water Management Act 2000* (the Act), typically respond to exceptional circumstances and are only applied if in the public interest. In this case, restrictions have been used to prioritise precious inflows to the northern NSW basin for critical needs during this record-breaking, widespread drought.

Under normal circumstances, water sharing plans provide the rules for how water is shared. During periods of extreme drought, some water sharing rules are no longer appropriate. Decisions by the NSW government are then guided by the sharing priorities under the Act, and the NSW Extreme Events Policy.

Following extended periods of no flow in the northern basin, we prioritise critical needs in the upstream catchments first. Then if the forecast flows can contribute to downstream catchments we continue to restrict until critical needs in these rivers can be met. Once flow forecasting indicates the critical human and environmental needs will be met, then restrictions can be progressively lifted.

Current and forecast flows

Storm activity since 6 February 2020 has contributed to localised inflows in all major river valleys in the northern basin. These began with flows in lower sections of the Namoi and Gwydir valleys, and then expanded to include the upper reaches of all the valleys north of the Castlereagh and Namoi through to the Border Rivers. Further intense rainfall in Queensland over the last week, has also resulted in large flows making their way towards NSW.

Prior to this rainfall, the river systems throughout many parts of the northern NSW basin were effectively dry. Within a fortnight, flows have now exceeded the NSW government's aims to meet critical needs in all key locations within the regulated rivers downstream of the major storages.

The Barwon River is receiving some of its first flows in months, with peak flows reaching 16,000 megalitres per day (ML/d) at Walgett, and flows now beyond Bourke. Given the unprecedented and widespread drought conditions however, all of this water is needed to reconnect the thousands of kilometres of dry river. This is expected to be the first natural flow to connect the river system from the top to the bottom since 2017.

Based on the latest flow forecasting, we are expecting that the inflow target at Menindee Lakes of 60,000 to 70,000 ML will be achieved, with higher volumes now likely. Accurate forecasting is a substantial challenge due to the long distances and extremely dry conditions.

Benefits of the temporary restrictions

These much needed flows are revitalising the dry rivers and parched landscapes in the northern basin, replenishing drinking water supplies and benefiting communities all the way along the river system.

Target flow volume at Menindee Lakes

Continuous flows in the Lower Darling River have not been provided since December 2018 due to the very low water levels in Menindee Lakes. Since then, a series of four temporary weirs have held small volumes of water within the Lower Darling river channel as a refuge for high priority needs. These are now effectively dry.

A volume of 60,000 to 70,000 ML into Menindee Lakes will enable a release of water along the full length of the Lower Darling River to Wentworth. Approximately 20,000 ML is required to replenish the dry river bed, flush out pools with poor water quality and top up within-channel storages behind temporary weirs. An additional 40,000 to 50,000 ML is needed within Lake Wetherell to provide a water supply reserve for the township of Menindee and a drought refuge if dry conditions return.

Securing town water supplies

The towns which have already benefited from these flows are:

Mungindi (pop 600) - Prior to recent rainfall, there was no alternative water source other than an artesian bore and Level 5 water restrictions were in place. River flows will significantly downgrade the risk to their water supplies and Council has already eased restrictions to Level 4.

Collarenebri (pop 650) - Collarenebri's primary water supply had less than four weeks of water supply remaining and Council was preparing to transition to groundwater. River flows will significantly downgrade the risk to their water supplies and Council is likely to review water restrictions. The weir in Collarenebri is now overflowing and the full weir pool will supply water to the town for over 6 months with no more inflows.

Walgett (pop 1,530) – The town previously had no access to surface water for potable water supplies. This had been provided by groundwater bores for well over 12 months except for short periods following flows that were protected from extraction upstream. A full weir pool will allow Council to review its sources of drinking water supply and water restrictions.

Brewarrina (pop 930) - Brewarrina has experienced water quality issues for many months relating to reducing levels in the town water supply weir. The weir is now full to overflowing and likely to improve this water quality situation, once the first flush has passed. Council has recently installed a kiosk providing palatable drinking water treated by a reverse osmosis unit.

Bourke (pop 2,100) – River flows that will refill the town water supply weir arrived late on 20 February 2020. Council has been using a groundwater supply for over six months prior to these flows. In the short term, Council has moved to total bore water use to allow the first flush of poor quality water to pass but will then be able to access the river supply and review water restrictions.

The towns which are forecast to benefit from these flows are:

Wilcannia (pop 610) – Potable water supplies are now provided by groundwater bores as weir pool levels are low. A full weir pool will allow Council to utilise their primary surface water supply and they may also review water restrictions.

Menindee and Sunset Strip (pop 450) - Potable water supplies are now provided by groundwater bores. A full weir pool will allow Council to utilise their primary surface water supply, and they may also review water restrictions.

Pooncarie (pop 80) - The town currently has no access to surface water for potable water supplies. Potable water supplies now provided by groundwater bores and water carting. A full weir pool will allow Council to utilise their primary water supply. Council may also review water restrictions and the need for water carting.

Flow connectivity and refuge pools

These flows will be critical to help start the long road to recovery for native fish and river health in the northern Basin and Lower Darling, and complement the NSW Government's $10 million commitment to support native fish during the current drought and bushfire season across the state.

Extended periods of drought significantly impact upon riverine environments and ecological processes. This can include a reduction in the availability of food, shelter and connectivity, as well as impacts on water quality. Waterways under high stress can lead to fish death events, which have been significant across most of NSW over the past two years, especially in the northern Basin and Lower Darling.

Short-term impacts on water quality are expected when flows resume in drying rivers, including rapid reduction in dissolved oxygen levels that results from the washing in of organic matter and sediment that has built up during the extended drought. This can have localised impacts on native fish species, including fish deaths; however, the environmental benefits from flows right across the northern basin will be significant.

Expected ecological outcomes include improving refuge habitat, connectivity within and between waterways enabling movement of fish, and better water quality over the medium to long term, assisting the dispersal of organic material through the system. This will all help build resilience in native fish populations, including threatened species, and other aquatic animals through improved health, survival, and community composition.

These flows will be important in providing some much needed replenishment of aquatic ecosystems that have been seriously threatened by the drought conditions.

Communities, industries and landholders

Protecting the flows from commercial use has meant that many riparian landholders finally have access to water supplies for their domestic and stock needs.

As a result of the flows, some access was also allowed for those with high security licences given their high priority under the *Water Management Act 2000*. They depend on highly reliable supplies and some businesses have had to invest heavily in alternative supply options or reduce their operations when the river previously ceased flowing. The lifting of restrictions for these entitlement

holders supports the survival of horticultural businesses, retains employees and ensures continued operations for major regional businesses.

Further information

The current orders apply until 28 February 2020, however as described above there are now a large number of exemptions. The restrictions may be extended in the Barwon-Darling system and floodplain after 28 February to protect flows to Menindee, which are not expected to arrive until late March. However, the department will continue to assess where flows have contributed to meeting local and downstream critical needs, and where access to subsequent flows can now be permitted. This information on where pumping can commence will continue to be posted on the Department's web page on temporary water restrictions and WaterNSW will directly contact water users.

Sign up to WaterNSW's Early Warning Network if you'd like to be notified by text message or email of the latest updates: waternsw.com.au/supply/ewn

The details of the current temporary water restrictions are available on the department's website at industry.nsw.gov.au/water/allocations-availability/temporary-water-restrictions

The latest flow forecasts are available on the WaterNSW website: waternsw.com.au/supply/regional-nsw/operations-updates.