

The Northern Inland Regulated Rivers Critical Water Advisory Panel (the Northern Panel) held its seventh meeting on 16 September 2019.

The Northern Panel was established in early 2018 in response to extended dry conditions in the Macquarie, Namoi, Gwydir and NSW Border Rivers systems. We have summarised the discussion and outcomes from the meeting of 16 September 2019 below.

Drought situation update

Supply to most of the northern inland regulated river valleys remains critical. Inflows are below the previous record drought flows and transmission losses are at record highs. The priority remains to maintain supplies for critical human needs for as long as possible.

Reports in the media of towns imminently running out of water were based on the worst-case scenario: that is, no further inflows to the river, combined with no measures to conserve supplies. This is not the actual situation. Significant contingency measures are being put in place to preserve surface water resources. Many towns can also use groundwater to fulfil all or part of their water needs.

Border Rivers

- A single strategic release from Glenlyon Dam to Boggabilla Weir will start on 23 September 2019.
- This release will fill Boggabilla Weir and ensure continued supply for Boggabilla, Goondiwindi and Queensland townships into early- to mid-2020.
- Release of between 12–13 gegalitres (GL) is required for approximately 3 GL delivery to Boggabilla Weir.
- All NSW towns on the Border Rivers should have alternative supplies (groundwater bores) in place before the river is at risk of ceasing to flow in March 2021.

Gwydir

- There are no immediate concerns for high-priority needs in the Gwydir Valley as there is sufficient water in storage to enable releases until at least 2021.

Upper Namoi

- Accessing the dead storage of Split Rock Dam will extend water supplies for Manilla and Barraba until late 2020. We are also considering a pipeline to Manilla from the dam.

Lower Namoi

- The situation in the Lower Namoi remains unchanged, with negligible inflows to Keepit Dam over winter and the storage too low for releases to be made.
- The only town relying on surface water from the Namoi is Walgett, located at the end of the river system. Walgett can also use supplies in the Barwon–Darling river and groundwater.

Macquarie–Cudgegong

- If no further inflows are received, and with current contingency measures underway, river flows should be sufficient until at least May 2020 to continue to supply major towns within the Macquarie valley.
- Warren and Narromine are using groundwater for town supplies and Cobar and Nyngan are continuing to be supplied with regulated flow via the Albert Priest Channel.

- The crest of Warren Weir has now been raised as a temporary drought measure. This means that regulated delivery downstream in the Lower Macquarie River has ceased. Duck Creek and Crooked Creek are also no longer receiving continuous flows. These measures will preserve remaining supplies in Burrendong Dam for critical town water supplies.
- An additional transfer of 29 GL from Windamere Dam to Burrendong Dam is planned for December 2019 if dry conditions continue. A 70 GL reserve in Windamere Dam will remain for local needs in accordance with normal water sharing rules.
- More options under consideration include pumping the dead storage from Burrendong Dam (21 GL) and an additional small transfer from Windamere Dam as early as autumn 2020. We would only take these measures if they are necessary to secure critical human water needs in the Macquarie valley.
- The Northern Panel discussed and recommended the further measure of ceasing regulated flow into Gunningbar Creek by December 2019. This would affect users and landholders along the creek, including a mining operation located at the end and currently extracting water under a high security access licence. Combined with the other contingency measures, these water savings would allow continuous supplies to be sustained along the river for towns and other high-priority needs upstream until mid-2020. This allows time to establish sufficient alternative supplies for Dubbo, including additional groundwater, water re-use and stormwater harvesting.
- A pipeline connecting to the existing Nyngan–Cobar pipeline could potentially provide water for the mine, but would take some months to construct and additional allocation for the mine would be needed.

Lachlan

- Changed river operations and restrictions on allocations will extend water availability for critical needs until at least mid-2021.

Water quality risks update

High temperatures and low flows over summer will significantly increase the risk of algal blooms. We are installing new dissolved oxygen sensors in the Barwon–Darling and Macquarie Rivers over the next few months to provide additional data. WaterNSW will shortly install a large bubble plume aerator at Burrendong Dam and potentially other reservoirs to improve the quality of remaining water supplies.

There is a red alert for blue-green algae in Lake Wetherell at Menindee; with monitoring showing that significant algal biomass is accumulating in this storage.

Water quality events response plan

Various state and local government bodies have a role in collecting data and responding to poor water quality events. Key risks include algal blooms, mobilisation of salinity with inflows, blackwater events, decreased oxygen and fish deaths.

The Department of Planning, Industry and Environment—Water has developed a broad oversight framework. We will work with the existing Regional Algal Coordination Committees and the newly created valley-based fisheries committees to review and assess water quality information to ensure responses are well coordinated and can be proactive, if possible.

Blue-green algae

The primary role of the Regional Algal Coordination Committees, chaired by WaterNSW, is to communicate information about algal events. Local councils and NSW Health are involved to help with actions for town water supplies. Landholders also need improved access to information about the risk water affected by algal blooms poses to crops and livestock.

WaterNSW is seeking approval from the NSW Environment Protection Authority to trial the use of chemicals to reduce algal growth. If approved, initial trials will be conducted in the Macquarie valley.

Fish health

The NSW Department of Primary Industries—Fisheries will mobilise valley-based technical and local expertise in assessing and responding to risks of fish deaths in the coming summer. The main focus now is on identifying the remaining refuge pools in each valley and assessing how likely they are to persist through the summer. Work is focused on the Macquarie valley, where we have mapped some 80 refuge pools.

Management responses may include relocating fish and installing aerators in key refuge pools. Work is already underway in relocating Murray cod, silver perch and golden perch from the Menindee area to better habitat in downstream sections of the Lower Darling that are connected to water backed up from the Murray. We will focus on maintaining genetic stock to help facilitate species recovery. The NSW Department of Primary Industries—Fisheries is engaging commercial hatcheries to hold some relocated fish for the duration of the drought.

Fish deaths place additional stress on communities. Early removal is important as decomposition can worsen water quality and contribute in turn to more fish deaths. In addition to the more isolated priority refuge pools, our focus will be on reducing the risk of fish deaths in pools near towns and early clean-ups if fish die.

We have released an expression of interest for suppliers to undertake fish clean-ups. Because of the rapid decomposition and transport costs, there may be limited opportunity for commercial reprocessing of dead fish, but suppliers will be asked to consider opportunities.

Temporary water restrictions

Temporary water restrictions (under section 324 of the *Water Management Act 2000*) have been implemented in several river valleys to restrict commercial access to water when supplies are severely limited. We considered placing a proactive restriction in the northern valleys to preserve any future inflows for critical needs. However, we favoured an event-based mechanism that allows better information to inform any restrictions.

We are developing maps identifying the critical extractive and environmental needs in each northern valley to assist decision-making for restrictions on inflows when they happen. The purpose of these maps is to provide a clearer visual representation of where we may need to protect inflows to meet critical needs. WaterNSW has been discussing this in detail with members of its River Operation Stakeholder Consultation Committees to help identify local critical needs, such as requirements and timing for domestic and stock replenishment flows.

People raised concerns about the impacts of unrestricted extraction for basic landholder rights on town and other high-priority water supplies. The appropriate departments will further investigate this issue.

Communication

The Department of Planning, Industry and Environment—Water will run another series of public meetings addressing drought issues in the coming months. We will align these meetings with other, similar government consultation events wherever possible, to reduce the number of meetings that people would need to attend. This may include joining with the Water Resource Plan or Sustainable Diversion Limit Adjustment Mechanism Project consultation events happening in October 2019 for the Barwon–Darling and Lower Darling Rivers, and with Customer Advisory Group meetings that WaterNSW plans to hold in November.

We plan for the Northern Panel to meet in November or December 2019, following the proposed public meetings. We expect other established panels to meet at that time.

Agencies present

- NSW Department of Planning, Industry and Environment:
 - Water Division
 - Environment, Energy and Science Division
 - Regions, Industry, Agriculture and Resources Division
- NSW Department of Primary Industries:
 - Agriculture
 - Fisheries
- WaterNSW
- NSW Rural Assistance Authority
- NSW Environment Protection Authority
- Local Land Services
- NSW Health
- Orana Joint Organisation
- Namoi Joint Organisation
- Central Joint Organisation
- Far North West Joint Organisation
- New England Joint Organisation
- Bogan Shire Council
- Warren Shire Council
- Cobar Shire Council

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