

Australian Government

Commonwealth Environmental Water Office

Namoi River watering event update 3

This is the third update on a re-connection flow in the Namoi River downstream of Wee Waa. The river had ceased to flow since August. This flow commenced on 9 November and reached Bugilbone on 22 November, improving survival prospects for native fish for about 100 km of river so far.

Progress of the flow

Water for the environment has returned flows to a section of the Namoi River downstream of Wee Waa after three months of no flow. Below are photos before and after the flow passed Miloo, which is located between Wee Waa and Bugilbone.



On Thursday 22 November, the flow in the Namoi River channel reached Bugilbone. By Saturday 24 November, the head of the flow was just downstream of Bugilbone, and can be seen clearly in the satellite image below.





Namoi River watering event

The flows for this watering event along the Namoi downstream of Wee Waa are shown below (left). There was no flow for three months prior to the watering event. The flow was designed to have a reasonable peak to refresh waterholes, and then will taper progressively back to a low flow so that fish can continue to move between habitats for several weeks after the peak. By the time the flow had reached Bullawa, about half way between Wee Waa and Bugilbone, the initial peak was gone.

The distance along the Namoi that the head of the flow has moved downstream of Gunidgera Weir this week is shown below (right). The head of the flow moved further in the second week than the first week. The speed at which the flow moves depend on factors such as the width of river bed, how much water is in the river bed (e.g. any connection with local groundwater), how hot it is and hence how much evaporation or whether it has rained, and how many waterholes need to be replenished before the flow can continue.

Stock and domestic water is also now being delivered, which is of mutual benefit for both the environment and water users.



Monitoring currently underway in the Namoi

NSW DPI Fisheries is undertaking long-term monitoring of fish in the Namoi River. Despite being in the midst of a drought, the fish monitoring last week was interrupted by the rain that fell around Wee Waa. (Importantly, this rain brought some welcome relief to many in the community – and we also hope for follow-up rain – both for people on the land, and for the environment).

Before the rain closed in (temporarily) the NSW fish scientists sampled water quality and fish in two waterholes just downstream of Gunidgera Weir, and at Old Weetawaa.



As mentioned in update 2, the dissolved oxygen was low in some stagnant waterholes before the flow arrived. Thankfully we can now report that the dissolved oxygen levels in the waterholes sampled have improved considerably following the passing of the flow. The temperatures have



been cooler in the last few days, which may also have contributed to higher dissolved oxygen levels.

From the fish monitoring of the two waterholes, generally the diversity of species was reasonable but the number of fish was low. Silver perch and Murray cod were sampled, albeit in very low numbers. Both of these species are endangered. No freshwater catfish were sampled. A low number of bony bream were sampled: this was expected as they are a fragile species and may be susceptible to poor water quality, and it is also quite common for diebacks of the species to occur in winter. Other species sampled were the native carp gudgeon, golden perch, and Murray-Darling rainbowfish, and the introduced goldfish and carp.

A complimentary action in the Namoi

The sequence of flows in a river is critically important for the protection and improvement of native fish populations. Some native species need to put on weight in winter before they breed in summer. When sufficient water for the environment is available, winter and spring 'priming' flows are becoming an increasingly important consideration for environmental water managers. Following this, flows that maintain connectivity along the waterway and to key habitat, as well as bring food sources into the system, are important for some species over summer and autumn to improve spawning and recruitment. Maintaining this connectivity, especially during dry times, is important to protect new recruits and adults in the system so they keep contributing to the population and a healthy native fish community.

If the succession of flows in a river change, one way to try and give endangered native fish such as silver perch more of an opportunity to create a healthy population is to undertake conservation stocking. Over 100,000 fingerlings have been bred in a hatchery and released further upstream of Wee Waa, between Gunnedah and Narrabri by NSW DPI Fisheries. Water for the environment has previously been used to protect these new recruits in the Namoi, with flows in the system helping them to move upstream and downstream in the search of food, friends and new homes.

Right - Ev an Knoll, from NSW DPI Fisheries, releasing silver perch into the Namoi



Government agencies working together

Commonwealth and NSW governments are continuing to work together to deliver and monitor the current delivery of environmental water in the Namoi River. For example, some of the photos and data included in this update came from a joint monitoring trip today by CEWO, WaterNSW and Dol Water staff. Data has also been kindly received from NSW DPI Fisheries.

The CEWO's local engagement officers, Jason Wilson (Walgett) and Neal Foster (Tamworth) are out and about during the flow event. For example, Jason is joining some students and teachers from Walgett as they travel down the Namoi from Keepit Dam, and Jason and Neal are participating in a meeting convened by the NSW Office of Environment and Heritage with



community representatives on environmental flows in the Namoi and Peel. Contact details for Jason and Neal follow.

Thank you and farewell!

Photographed with silver perch destined for release into the Namoi is Neal Foster. Neal is a long-term resident of the Namoi catchment, and serv ant of northern Basin through jobs held with NSW and the Commonwealth. Neal is retiring in early December.

We at the CEWO thank Neal very much for his thoughtful, knowledgeable, diligent and inspired service over the last eighteen months. We understand how important family is to Neal. We wish Neal lots of fun times with his grand kids in his well-earned retirement.



Contacts

CEWO Local Engagement Officers:

Neal Foster (and the next Neal!) **O** 0437 141 495

Jason Wilson • 0418 210 389

CEWO Website:

http://www.environment.gov.au/water/cewo

CEWO media line:

- e media@environment.gov.au
- O2 6275 9880

CEWO:

ewater@environment.gov.au

Additional information

Updates on the Namoi watering action http://www.environment.gov.au/water/cewo/catchment/namoi/catchment-updates

2018-19 Portfolio management plan for the Namoi http://www.environment.gov.au/water/cewo/publications/portfolio-mgt-plan-namoi-2018-19

Photo and image credits

1, 6 - Commonwealth Environmental Water Office (Neal Foster)

2 - Source: <u>https://apps.sentinel-hub.com/sentinel-playground/</u>from the European Space

Agency. Accessed with the assistance of the Murray-Darling Basin Authority

- 3 Murray-Darling Basin Authority
- 4 Bureau of Meteorology
- 5 NSW DPI Fisheries

