Australian Government
Commonwealth Environmental Water Office

Namoi River Valley: 2018–19 Water Use

Supporting native fish during dry conditions

In 2018–19 very dry and hot conditions continued in the Namoi River Valley, with the catchment experiencing the lowest inflows on record in one of the worst drought sequences in history. Cease to flow conditions had occurred along the length of the Namoi River from Keepit Dam to Walgett.

The Namoi is home to around 13 native fish species including a number of threatened fish species, such as Murray cod, silver perch, and freshwater catfish. In spring 2018, remnant fish populations in the Namoi River downstream of Wee Waa were at risk, as waterholes became very shallow or began to dry out.

Namoi River at Bugilbone before the delivery (CEWO).

As disconnected pools begin to dry, the dissolved oxygen levels in the water can fall. This can impact on the survival of native fish dependent on those pools. In an extremely dry landscape these areas also provide important habitat and refuge for insects, frogs, turtles and waterbirds.

Expected outcomes

Maintain and provide access to refuge habitat, increase connectivity, and improve water quality in pools.

Provide opportunities for the movement of native fish, and increase native fish survival.

What was the response?

Between November and December 2018, 5.5 GL of water for the environment was delivered to the Namoi River downstream of Gunidgera Weir to improve water quality, and support the persistence of refuge habitat and native fish survival.

Re-connection

Water for the environment and the drawdown of Gunidgera weir pool replenished water holes along an estimated 150–200 km long section of the Namoi River between Wee Waa and Walgett. The Namoi flow reached Walgett for the first time in over nine months, bringing some short-term relief along this stretch of river.

Lower Namoi River during the delivery (CEWO).

Water Quality

Water quality monitoring demonstrated the benefits of the flow by increasing dissolved oxygen levels in refuge pools, well above the 4 mg/L required to prevent native fish becoming stressed.

Water quality monitoring (WaterNSW)

Native fish

The flow increased oxygen levels and replenished pools, therefore improving conditions and the chance of survival of native fish such as golden perch, Murray cod and bony bream. Many of these species are recreationally important and culturally significant.

Murray cod in the Lower Namoi River during the environmental water delivery. (NSW DPI – Fisheries)

The presence of some large fish (like the one shown above) in the lower Namoi highlight the importance of maintaining and connecting refuge pools during dry times to increase the chance of survival for these fish.

Social

The water also provided benefits to communities along the river, lifting spirits during the severe drought, and supporting delivery of water for stock and domestic purposes, and access to water for basic landholder rights.

Peel Water Use

No water for the environment was delivered in the Peel in 2018–19. The low volumes of water for the environment available in Chaffey Dam were insufficient to meet key environmental demands in the Peel River, and minimum flows provided by other water sources maintained refuges for native fish.

Peel River (NSW DPIE)

Our partners

Delivery of water for the environment in the Namoi River Valley is planned and managed by the Commonwealth Environmental Water Holder in consultation with the NSW Department of Planning, Industry and Environment – Biodiversity and Conservation; NSW Department of Primary Industries – Fisheries; and WaterNSW.

Local Engagement Officers

The Commonwealth Environmental Water Office has two Local Engagement Officers based regionally in the northern Murray–Darling Basin, who can be contacted for further information:

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