



Office of
Environment
& Heritage

Gwydir catchment

Annual environmental watering priorities 2017-18

Planning for the year ahead

Early season rainfall in 2016–17 paved the way for good watering throughout the Gingham and Lower Gwydir watercourses. These early rains were followed by several months of dry weather, which enabled environmental water to be used to prolong the benefits to these wetlands over the course of the growing season.

In addition, strategic environmental flows resulted in inundation of Mallowa Creek, watercourse and wetlands.

Due to the dry conditions, water managers, together with the Environmental Water Advisory Group, are planning limited proactive watering in the year ahead. Any early season flows that do occur will take advantage of cooler conditions aimed at stimulating productivity in the rivers before summer.

Weather and water forecast

The forecast for 2017–18 includes average rainfall and daytime temperatures in the east of the valley, and below-average rainfall and warmer than average daytime temperatures in the western portion of the valley. Water management plans reflect these conditions.

Water managers have prepared watering plans that take into consideration a range of weather and water availability scenarios, in case it rains more or less than expected. This is known as resource availability scenario planning (www.mdba.gov.au/sites/default/files/archived/altered-PBP/APBP-Ch7-Guideline.pdf). Dry scenario actions are proposed for the Gwydir valley.

Gwydir resource availability scenario

Very dry

Main aim: Protect

- Avoid critical loss
- Maintain key refuges
- Avoid catastrophic events



Dry

Main aim: Maintain

- Maintain river functioning
- Maintain key functions of high priority wetlands



Moderate

Main aim: Recover

- Improve ecological health and resilience
- Improve opportunities for plants and animals to breed, move and thrive



Wet to very wet

Main aim: Enhance

- Restore key floodplain and wetland linkages
- Enhance opportunities for plants and animals to breed, move and thrive



Key planned actions for 2017–18

Waterbirds



Wetter than expected conditions in the Gwydir valley last year resulted in significant waterbird breeding. If additional water becomes available, environmental flows will help maintain waterbird habitat, including refuge sites and food sources to support the waterbird population and breeding events.

Connectivity



If substantial rainfall occurs, flows (of up to 15 gigalitres) may be used to mimic unregulated flows that inundate watercourses and wetlands along the Lower Gwydir, Gingham and Mallowa Creek systems.

In dry river conditions, flows (up to 8 gigalitres) may be used to provide low flows to connect key refuge pools in the Gwydir River, upper Mehi River and upper Carole Creek sections.

Vegetation



Limited proactive watering recognises the importance of a natural drying phase in the wetland system. If additional water becomes available during 2017–18, environmental flows are likely to help vegetation such as river red gums and wet marsh habitat flourish.

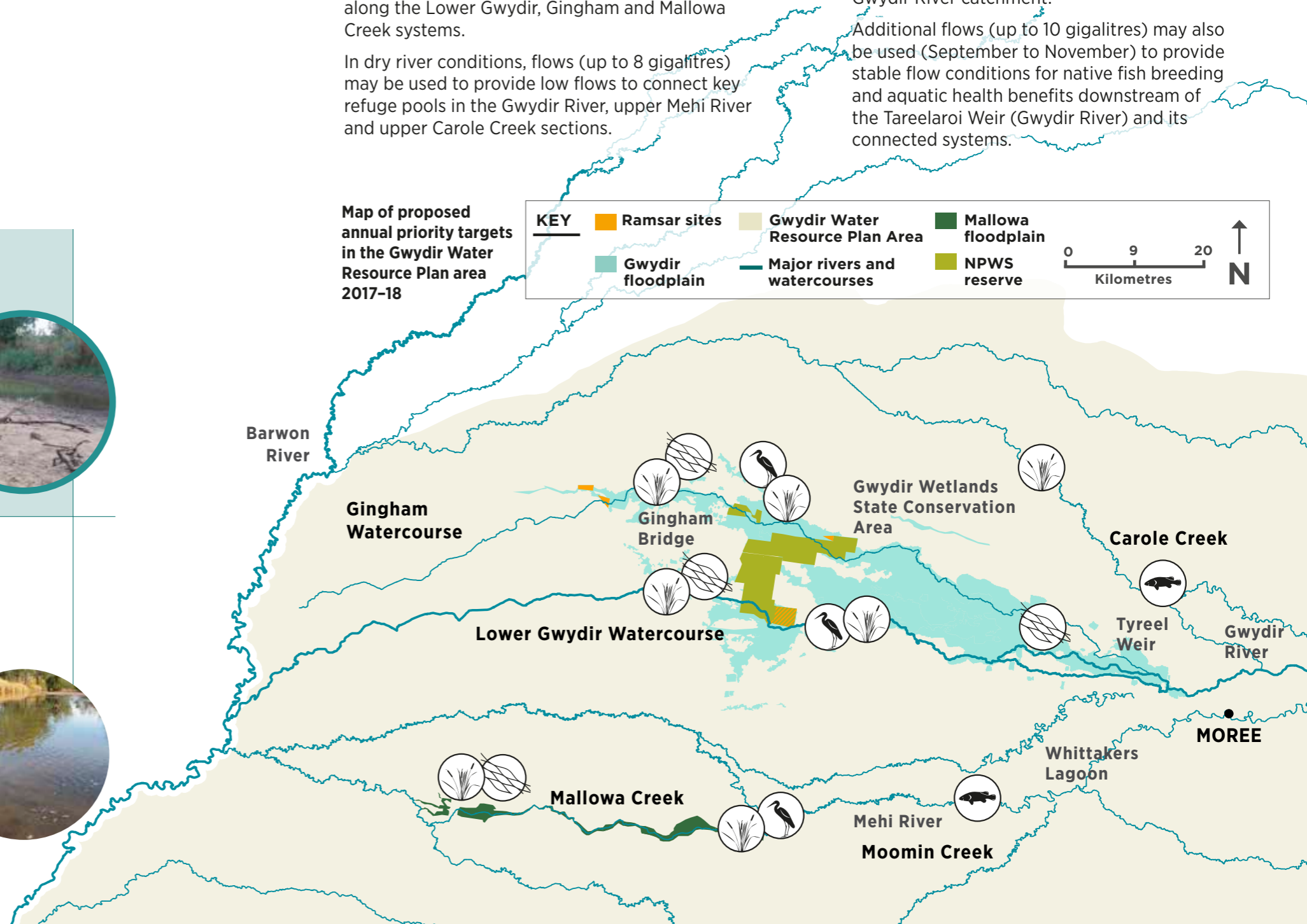
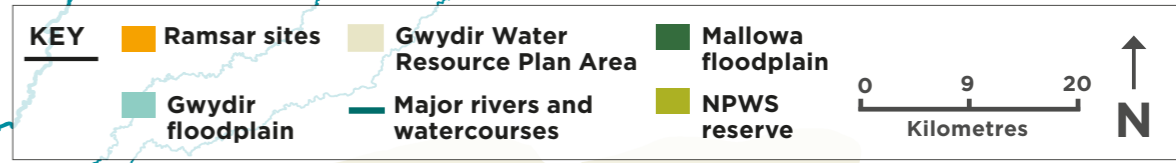
Native fish



Water (up to 15 gigalitres) may be made available to provide an early season stimulus flow (July to September) for native fish communities and aquatic health in the upper Gwydir River catchment.

Additional flows (up to 10 gigalitres) may also be used (September to November) to provide stable flow conditions for native fish breeding and aquatic health benefits downstream of the Tareelaro Weir (Gwydir River) and its connected systems.

Map of proposed annual priority targets in the Gwydir Water Resource Plan area 2017–18



How we make decisions

OEH uses the best available science, management expertise and experience to identify watering sites and provide the right amount of water where and when it is needed.

This statement of annual environmental watering priorities identifies the waterways and wetlands that are likely to receive water. We take into account how much water is expected to be available in the coming year, conditions of the previous year, and the current health of the plants and animals in these ecosystems.

As rainfall is difficult to predict, we plan for a range of objectives based on different scenarios. These scenarios are determined by how much water is likely to be available in the coming year, the climate conditions of the previous year and the seasonal forecast for the coming year.

Community-based Environmental Water Advisory Groups (EWAGs) provide feedback and advice to OEH on the management of water for the environment.

What is water for the environment?

Water for the environment is a share of the water in dams and rivers that is set aside to support the long-term health of local rivers, creeks and wetlands. Healthy rivers carry water to homes, farms, schools and businesses. In the Gwydir valley, rivers and wetlands also hold significant spiritual and cultural importance for Kamilaroi (Gomeri) Aboriginal people.

About the Gwydir valley

The Gwydir valley covers 25,596 square kilometres. The smaller, eastern upland creeks mainly flow into the Gwydir River, upstream of Copeton Dam. Downstream, on the western floodplain, the Gwydir River splits into its main distributaries – the Mehi River (south), Carole Creek (north), Lower Gwydir (or Big Leather) and Gingham (central). The Lower Gwydir supports the state's largest stand of marsh club rush which is protected by NSW legislation. The Gingham and Lower Gwydir includes an international Ramsar agreement consisting of four listed areas.

Expected environmental water volumes available at 1 July 2017

Source	Maximum volume available	Volume expected at 1 July under current conditions
Planned environmental water		
Environmental water allowance	45 to 90 gigalitres	64 gigalitres
Water licensed to NSW		
General security	17 gigalitres	10 gigalitres
Supplementary	3 gigalitres	Event-dependent
High security	1.2 gigalitres	1.2 gigalitres
Water licensed to the Commonwealth		
General security	89.5 gigalitres	83.2 gigalitres
High security	4.5 gigalitres	4.5 gigalitres
Supplementary	20.4 gigalitres	Event-dependent

Note: This is an indicative summary of expected volumes to be available. For further detail and information on available volumes please contact the region via the Environment Line 131 555.

1 gigalitre = 1000 megalitres

2.5 megalitre = 1 Olympic swimming pool