

# Environmental water requirements for the Fitzroy River



Northern Australia  
Environmental  
Resources  
Hub

National Environmental Science Programme

World class research to support sustainable development in northern Australia

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This research is improving our understanding of the environmental water needs of key plant and animal species in the Fitzroy River to inform sustainable water planning and management decisions.

## What's new?

We have:

- selected study sites and shared knowledge with Traditional Owners on Nyikina-Mangala, Yi-Martuwarra and Gooniyandi country as well as worked with Indigenous rangers
- characterised aquatic food webs in pool and run habitats
- collected data to determine the use of groundwater by key riparian tree species at the end of the dry season
- sampled wet season floodplain fish and algae to learn more about their contribution to the food web
- surveyed fish to determine dry season habitat requirements and food sources (surveys were conducted at 31 sites along the river including main-channel pools, main-channel sandy runs and off-channel wetlands)



Fieldwork on the Fitzroy: Nathan Green from the Nyikina Mangala Yimardoo Warra Rangers (top) and Leah Beesley from UWA, photos Michael Douglas.

- surveyed woody riparian vegetation in the dry season to determine the relationship between inundation history and species distribution (we completed rapid vegetation surveys at 58 sites)
- developed principles and key considerations for planning and management
- worked closely with WA Department of Water & Environmental Regulation, and presented project update to Department of Biodiversity, Conservation & Attractions.

## What's next?

- continuing fish surveys
- collecting data to measure plant functional traits relating to surface and sub-surface water regime, including the installation of piezometers
- developing a framework of relative vulnerability of key species to changes in water regime, synthesising the results of the project's studies
- scientific paper in prep: *Predicting the occurrence of riparian woody species to inform environmental water decisions in the Lower Fitzroy River, Western Australia.*

## Further information

Contact project leader, Michael Douglas at [michael.douglas@uwa.edu.au](mailto:michael.douglas@uwa.edu.au)

The project page can be found on the Hub website at [nespnorthern.edu.au](http://nespnorthern.edu.au), along with the project start-up factsheet.

This project is due for completion in December 2020.

