

# Projects

## Barmah-Millewa Forest Hydrodynamic Model



### Client: Goulburn Broken CMA, DSE, MDBC

The Barmah-Millewa Forest covers an area of over 66,000 hectares and is the largest Red Gum forest in Australia. It provides habitat for numerous threatened plant and animal species, including birds, fish and reptiles. There are significant connections to the Barmah-Millewa Forest amongst Indigenous peoples and the broader community.

This ecologically rich and valued wetland complex was formed through the development of the Cadell Fault. The Cadell Fault was created as the result of a large earthquake approximately 25,000 years ago, causing an uplift of approximately 10 m roughly between Echuca and Deniliquin that blocked the ancestral path of the Murray. This caused the river to be diverted north through Deniliquin (Edward River) and later south through Barmah and Echuca (present course of the Murray River). At the same time a wide expanse of lakes and wetlands were formed in a triangle shape east of the fault line.

The Barmah-Millewa Forest is a Wetland of International Importance under the Ramsar Convention and has been recognised as one of the six Significant Ecological Assets that are the focus of the Living Murray Initiative supported by the State and Federal Governments.

As part of the Living Murray Initiative, the Barmah Environmental Water Management Plan, aims “to enhance the current program for floodplain rehabilitation to protect the ecological character of the floodplain”. Water Technology has been engaged to develop a



detailed hydraulic model to assess various management scenarios to enhance ecological outcomes of forest management practices.

For more information contact Warwick Bishop ([warwick.bishop@watech.com.au](mailto:warwick.bishop@watech.com.au)).

### Services Provided

- Combined one and two-dimensional hydrodynamic modelling
- Detailed terrain analysis and digital elevation model (DEM) development
- Hydraulic structure modelling
- GIS interfacing and result presentation