

## RESEARCH IN PROGRESS

### Optimising frog breeding responses

**Optimising frog breeding responses to flooding in managed wetlands (multiple projects) (2006–2011)**

**Funding:** NSW DECCW and Murray Wetlands Working Group

**Investigators/researchers:** Dr Skye Wassens, A/Prof Robyn Watts, Dr Andrea Wilson, Andrew Hall (all ILWS), Dr Jennifer Spencer (DEH NSW)

#### Description

Research on frog responses to flooding commenced in 2006 with a DEH funded project which aimed to develop predictive models on how frog species would respond under various flooding scenarios. This led to a second project on the Murray River funded by the Wetlands Working Group (2007-2009) where these key hypotheses were tested across a range of wetland types. Also in 2007 the researchers developed an emergency watering strategy to save the endangered Southern Bell Frog which was at risk of extinction due to altered flooding regimes in the Lowbidgee floodplain.

The success of this strategy led to further research in collaboration with Dr Jennifer Spencer (DEH) to identify relationships between the response of fish, waterbirds and frogs following managed flood events this project ran from 2007 to 2011 and the team was fortunate to capture the response to the very large flood event in 2010-2011. While continuing this large scale project funding was obtained from DEH to test the response of frog communities to the 2010-2011 flood event in the Mid-Murrumbidgee wetlands. This project integrated past survey data from the IMEF monitoring program with surveys following the 2010-2011 flood events.

#### Outputs

Three journal articles, two book chapters, seven conference presentations, eight technical reports.

#### Outcomes

This research has been instrumental in the inclusion of frogs in environmental watering strategies and the conservation of the endangered Southern Bell Frog. The research findings underpin the environmental water strategies for the Murrumbidgee Floodplain 2007-2011 and planned environmental watering in the Mid-Murrumbidgee wetlands in 2011-2012.



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