

# Agricultural practices unknowingly cause poisoning of lake catchment

September 14 2015, by David Stacey

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Agricultural clearing and drains installed by farmers to lower water tables and manage salinity are inadvertently impacting waterways in one of the largest and most botanically significant regions in Australia, according to new research from The University of Western Australia.

PhD student Adam Lillicrap investigated the sources of [acid](#) groundwater around the Dalyup River and Lake Gore [waterways](#) system and the Jacup-Cameron Creek in the Fitzgerald River National Park in the Goldfields Esperance region of WA.

He found that rising acid groundwater tables were flowing into waterways as a result of agricultural clearing by landholders who didn't

realise the impact of their activities.

"Acidification of waterways is normally associated with human causes such as acid rain caused by pollution or mining," Mr Lillicrap said.

"The largest extent of naturally occurring acid water in the world occurs across southern Australia from Western Australia to Victoria, however under natural conditions this acid groundwater rarely flows to rivers.

"With clearing for agriculture, watertables have risen and acid water now discharges to rivers impacting on the biodiversity of these systems."

Mr Lillicrap said his study also found that agricultural drains installed by farmers to lower water tables in a bid to manage salinity had inadvertently increased the acidification.

The research found that more than 100 kilometres of waterways in the in the Dalyup catchment headwaters were already permanently acidified.

"Lake Gore is a wetland of international significance under the Ramsar Convention and unless management action is taken, the lower catchment of the West Dalyup River will become increasingly acidified and discharge high levels of aluminium, a toxic metal, into Lake Gore," Mr Lillicrap said.

"It is important that landholders, natural resource management groups, government and the community work together to manage this issue before it's too late."

The work follows research by the UWA Centre of Excellence in Natural Resource Management into the ecological impacts of deep drains across the Wheatbelt which found that the loss of stream and wetland invertebrates could impact other organisms such as frogs and fish that

feed on them.

Provided by University of Western Australia

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