

Drinking recycled water?

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The Australian Government National Water Commission funded a study to establish an approach to assess the quality of water treated using managed aquifer recharge. Researchers at Australia's CSIRO Land and Water set out to determine if the end product would meet standard drinking water guidelines.

At the Parafield Aquifer Storage, Transfer and Recovery research project in South Australia, the team of scientists harvested storm [water](#) from an [urban environment](#), treated it in a constructed wetland, stored it in an aquifer, and then recovered the treated water via a well.

The storm water exceeded the Australian drinking water guidelines prior to treatment. Small amounts of [fecal bacteria](#), elevated concentrations of iron, and other contaminants were found in the water. After undergoing treatment, however, the water collected from the aquifer had dramatically lower levels of all hazards. Further supplemental treatment was needed to remove some hazards, though the process shows potential if improvements are made.

"Overall, results from the assessment showed that the water produced via this process was of near potable quality," says Declan Page of CSIRO Land and Water, "This is the first reported study of a managed aquifer recharge scheme to be assessed following the Australian guidelines for a managed aquifer recharge."

CSIRO Land and Water is continuing research in an effort to develop a sustainable method of recycling water through an aquifer.

The results of this study have been published in the November /December 2010 issue of the [Journal of Environmental Quality](#).

More information: www.agronomy.org/publications/.../abstracts/39/6/2029

Provided by American Society of Agronomy

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