

RESEARCH DIRECTIONS

A sporting chance for water supply

Professor Basant Maheshwari, from the School of Science and Health, is investigating the harvesting of stormwater to replace potable water supply for irrigation of local sports grounds. The project, which is a partnership with Liverpool City Council, is also examining how to improve the water quality in Wattle Grove Lake where aquatic life is dying.

'Because of current water shortages, population growth, greater expectations and possibly climate change, integrated water cycle management is becoming more important. Sporting ovals and other public open spaces often rely fully or partially on potable water supplies for irrigation,' says Professor Maheshwari. 'Like most councils in the Sydney metropolitan area, Liverpool City Council is faced with reduced water supplies for irrigation of sporting ovals and the rising cost of potable water supplies.'

The natural hydrological cycle of the Liverpool City Council area is largely disrupted by the urbanisation that has occurred over the past 10 to 15 years. Increased hard surface areas, potable water reticulation and the sewage collection system complicate the area's water management. Large volumes of stormwater are generated during heavy rain, and both stormwater and sewage overflow contribute to pollution in local waterways. The council is faced with the deteriorating health of Wattle Grove Lake, an important environmental and recreational asset for residents, where there have been algal blooms and the death of ducks and fish.

Professor Maheshwari's stormwater management project is in two parts. The first concerns creating a sustainable water supply for irrigating ovals in the suburb of Chipping Norton. The second concerns management of stormwater to improve the health of Wattle Grove Lake. The irrigation aspect involves assessing the medium- and long-term impacts (to soil salinity, pH and turf health) of irrigating sporting



ovals with treated stormwater; identifying design and maintenance requirements of wetlands systems; and identifying other council areas that would be suitable for an irrigation program. The lake study involves monitoring the quality of water entering the lake and flowing out into Anzac Creek.

Eliminating the use of drinking water for irrigating grass on sports grounds is an important goal. If stormwater can be effectively harvested and cleaned up through a wetlands "filter", it can create a sustainable alternative supply of irrigation water. And reducing pollution levels in natural aquatic habitats such as Wattle Grove Lake would enhance the community value of a prized asset.

Project Title: Sustainable Management of Stormwater, Wetlands and Wattle Grove Lake in the Liverpool City Council Area

Funding has been set at: \$61,384

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February 2014



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