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Innovation in water for community benefit

The Western Suburbs Regional Organisation of Councils (WESROC) has partnered with the Department of Water (DOW) and the Water Corporation to explore solutions to the supply and quality of groundwater.

Groundwater levels in the western suburbs continue to fall and salinity has increased in certain areas.

City of Nedlands Mayor Max Hipkins said, "It is becoming increasingly difficult to source water to irrigate parks, gardens and sporting fields."

There are a number of options for how recycled water from the Subiaco wastewater treatment plant may be used to address this.

WESROC has already conducted preliminary investigations into using recycled water for directly irrigating parks and public open space. Another option is managed aquifer recharge (MAR) where recycled water could 'top up' the superficial aquifer for reuse, which would also address the salinity and tree stress issues.

A third option is that wastewater from the Subiaco treatment plant be developed by the Water Corporation as a future drinking source via groundwater replenishment to the deeper Leederville aquifer.

A fourth option is additional road soak-well installations and potentially excess stormwater for managed aquifer recharge.

To assess the costs and benefits and to determine the best outcome for the public good, a summary of the five options to be assessed are:

- use of scheme water for irrigation, offset by groundwater replenishment (Water Corporation proposal);
- direct piping of recycled wastewater for irrigation;
- managed aquifer recharge of treated wastewater for irrigation;
- stormwater infiltration; and
- water use optimisation.

Water use optimisation is not a 'full' option and is already well advanced among WESROC with practices such as hydrozoning and various waterwise initiatives. It will, however, be further explored by the Department of Water and is likely to complement whichever option or options prove most feasible.

The Department of Water is funding the development of a conceptual groundwater model for the area and a pre-feasibility study of managed aquifer recharge for the western suburbs.

WESROC will fund the stormwater infiltration investigation, the cost-benefit analysis of the five options and provide in-kind research and coordination.

The Town of Cottesloe implemented a local MAR in 2006 – 2009.

Town of Cottesloe Mayor Jo Dawkins said, “The three-year Restoration of the Groundwater Aquifer on the Cottesloe Peninsula Project has and is continuing to meet its main objective of preventing saltwater intrusion into the localised aquifer”.

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About WESROC

The Western Suburbs Regional Organisation of Councils (WESROC) comprising the Towns of Claremont, Cottesloe, and Mosman Park, the Shire of Peppermint Grove, the Cities of Nedlands and Subiaco with the Town of Cambridge work on a voluntary partnership on cross-boundary regional projects.

About the City of Nedlands

The City of Nedlands is situated 7km from Perth and stretches from the banks of the Swan River to the edge of the Indian Ocean. A population of over 21,000 live in the suburbs Nedlands, Dalkeith, Mt Claremont, Swanbourne, Karrakatta, and parts of Floreat and Shenton Park.

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