

Date

December, 2014

Issue:

The Managed Aquifer Recharge (MAR) Project for the Kwinana Industrial Area

KIC Position and Key Messages

- Supplementing the groundwater supply with a safe and affordable alternative water supply is one of KIC's key strategic issues.
- Securing a long term water source for major industries within the Kwinana Industrial Area (KIA) has been a priority for industry for several years.
- The KIC views recycled water as the preferred supply option from an environmental and sustainability viewpoint.
- There will be four water waste treatment plants located within the Western Trade Coast, so KIC believes reusing waste water is the most obvious solution to a secure long term water source for Industry.
- The Managed Aquifer Recharge (MAR) Project in the KIA is due to be completed in March, 2015.
- The MAR Project is a jointly funded project between the KIC, the Australian Water Recycling Centre of Excellence and CSIRO. It is managed within the Western Trade Coast Industries Committee (WTCIC).
- Close to 75% of the water for industrial processes comes from the groundwater aquifers.
- Because the project is located within the Western Trade Coast where the process water demands are, it is therefore highly relevant.
- Implementing MAR is not part of the project. This will be considered after all the science has been gathered and the project has made a recommendation about if MAR will work in the area or not.
- The outcome of the research will be watched by industrial areas around Australia as many are facing potential process water shortages in the future.

Background information

The Managed Aquifer Recharge (MAR) Project, which is a joint study into the potential for a large-scale aquifer recharge scheme is underway.

The Project is expected to provide recycled water for heavy industries located within the Western Trade Coast, but primarily within the Kwinana Industrial Area.

The Project is being led by CSIRO. The Kwinana Industries Council (KIC) is a founding partner. The Department of Water, Western Trade Coast Office, Water Corporation and the WA Department of Health are engaged in the project steering group.

The Managed Aquifer Recharge (MAR) Project is a process that takes treated wastewater and then stores it in an underground aquifer. The added water mixes with the natural groundwater and flows slowly through sand and limestone to be available for use.

Secondary treated wastewater is currently pumped out to waste in the ocean. It is a proportion of this water that is being considered for MAR, once it has been cleaned up to the standard required for aquifer recharge. MAR can also be used to store water from various sources, such as stormwater, reclaimed water, mains water, desalinated seawater, rainwater or even groundwater from another aquifer.

The treated waste water can be added via infiltration basins or through underground galleries, so that it is further treated as it infiltrates through the earth before reaching the aquifer. The outcome of the research will be watched by industrial areas around Australia as many are facing potential process water shortages in the future.

It is expected that more than 30 GL of treated wastewater could be available for recharge from existing wastewater treatment facilities in the Western Trade Coast.

A groundwater recharge scheme could see industry using much more of this increasingly valuable resource for its process water requirements.

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