



REGIONAL WATER SECURITY & SEWER UPDATES

MARDI WATER TREATMENT PLANT, NATURAL ORGANIC MATERIAL REMOVAL

What's needed?

State Government funding for the project to a maximum of \$15m.

Central Coast Council will undertake the management of the project and fund any difference in the cost of the upgrade above funds provided by the State Government.

What's been done?

An Investigation and Options Analysis undertaken in early 2015 identified the need to construct additional settling tanks. Concept design of these works will be undertaken in 2016.

Description

An upgrade of the Mardi Water Treatment Plant is required to remove Natural Organic Material (NOM) from raw water sourced from local catchments.

The Mardi Plant provides approximately half of all treated water to the Central Coast and all water transferred to the Hunter from the Central Coast. The treatment plant was constructed in the early 1980s and is of the direct filtration type.

This type of treatment process has a limited capability to remove dissolved natural organic material from the raw water sourced from local catchments. Whilst dissolved NOM is not in itself a health issue for drinking water, it does impact on the ability to maintain residual chlorine in the reticulated water supply as the chlorine is readily consumed by the NOM.

NSW Health is progressively increasing its standards for the achievement and maintenance of minimum residual chlorine levels throughout the reticulation system, out to the extremities of the system.



Description (cont.)

The introduction of environmental flow requirements associated with Water Sharing Plans has resulted in reduced water extractions during low and medium river flows and a corresponding increase in high flow extractions. This has resulted in having to extract lower quality river water which contains more NOM and is also more difficult to treat with the current treatment facilities.

Whilst water from Mardi water treatment plant meets health requirements for residual chlorine levels (disinfection) on leaving the plant, it is soon consumed within the reticulation system. Council currently manages this by enhanced inspections and manual chlorine dosing.

It is estimated the necessary upgrade would cost approximately \$15M. Approvals, design and construction would typically take 3 years for an upgrade to a water treatment plant.

Benefits

- Better meet NSW Health expectations for residual chlorine and associated disinfection by-products.
- Achieve enhanced drinking water quality.
- Reduced potential for boiled water alerts
- Reduced risk of water contamination.

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