

TREES HELP SOLVE EFFLUENT PROBLEMS

Trees are playing an increasingly important role in helping south-west communities to combat potential environmental problems in the disposal of treated waste water.

Over the past three years, the Department of Conservation and Land Management (CALM), working with the Water Corporation and several private companies, has planted trees that use treated waste water from reticulated sewerage systems and industry. Trees have been planted at treatment works in Australind and Dardanup, and the department has planted 33 hectares to help control waste water from a dairy in the South West.

CALM also planted about

350 hectares, mainly of bluegums, on the Water Corporation's treatment works north of Albany, and in 1997, it is planned to establish a further 20 hectares of plantations for the Peters Creameries Plant at Brunswick.

The main species planted were Tasmanian bluegums (*Eucalyptus globulus*) and river red gums (*E. camaldulensis*). Both species grow vigorously in their first five years and help reduce the infiltration of elements such as phosphorus and nitrogen into natural water courses.

The trees can also have an impact on water tables by drawing on water irrigated from the treatment plant. Harvesting or replanting trees and letting the stumps

sprout also ensure ongoing absorption of nutrients from the waste water. The dense canopies formed by the plantations can also intercept and absorb up to one-third of the rainfall.

Organic matter, which builds up in the soil, has a beneficial effect as it can immobilise elements such as phosphorus, nitrogen and trace elements, thereby slowing the rate at which these elements leach into natural waterways. This helps overcome problems of pollution, particularly algal blooms, that are a result of high concentrations of these elements.

Some of the plantations have been established on a commercial basis and can be harvested to supply the

world's burgeoning wood-fibre market. This will provide a return to the landowner well above the costs of establishing the trees. There is expected to be a continuing need for plantations to be established on sewerage sites throughout the South West, with recent studies showing that these could total about 1 000 hectares.

CALM will be carrying out more work into identifying potential sites and discussing specific problems with waste water managers. The department will also be looking at other tree species, such as sandalwood, that could play a role not only in providing environmental benefits, but in providing commercial returns as well.

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# LANDSCOPE

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Aquatic bugs are helping scientists to determine the health of WA's waterways. See Spineless Indicators on page 49.



CALM's new Marine Conservation Branch gets in deep (page 10) to play its vital role in safeguarding the health of WA's unique marine environment.



Called 'Karlamilyi' by desert Aborigines, Rudall River National Park (page 28) is steeped in history and bristling with wildlife.



The economic, social and conservation potential of Acacia in WA, a story of a golden future on page 16.



Fancy a walk? Join us while we look at the environment, history and building of a new Bibbulmun Track. See page 36.

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The tiny pebble-mound mouse of the Pilbara (see story on page 42) is a tireless night-worker and the architect of many odd, red gravelly mounds, which look like miniature volcanoes among spinifex.

Illustration by Philippa Nikulinsky



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