NEWS

DEEP DRAINAGE OPTIONS TO 'REDUCE UNCERTAINTY'

Tony Clack from the River Conservation Society, York, reports on the long-awaited Avon River Regional Drainage Evaluation report that was presented by officers from CSIRO at the Greenhills Hotel near York early in March.

The CSIRO report disclosed the outcomes of a modelling study that had been under way for two years and highlighted the recommended engineering options to address salinity issues in the Avon and other catchments.

Deep drainage in the wheatbelt, as a way to carry away saline and acidic groundwater from salt-affected agricultural land, has been a contentious environmental issue for a number of years. While it is acknowledged that in some landscapes, deep drainage can help in reclaiming salt-affected farmlands in the valleys of the Avon and other catchments, there has been an issue involving the disposal of such groundwater that could prove extremely harmful to downstream environments.

The WA Channel Management Group (WACMG), formed in 2003, to push for government-funded feasibility studies, have proposed a series of arterial drains, hundreds of kilometres long, snaking across the wheatbelt and delivering a hyper-saline and acidic load into the major rivers and wetlands of the region – the Yilgarn, the Lockhart and the Avon.

However the CSIRO report has found that while deep drainage might be an option for some farmers, down-stream disposal into the Avon River, and subsequently the Swan, is environmentally unacceptable.

The big environmental issue with saline groundwater is that while it is saline, it is also acidic, particularly the groundwater from the upper catchments such as the Yilgarn and Lockhart, where soils can be naturally acidic. There is also an issue with heavy metals and other contaminants. The water thus channelled would threaten the ecosystems of the Avon and Swan rivers.

The Avon River has been affected by increased salt loads for many years, but the salt levels have increased only at a very slow rate. The slowness of increase has allowed aquatic life living in the river and the permanent summer pools to adapt to a changing environment. A sudden change, such as a sharp rise in salt levels with the addition of acid water would wipe out all aquatic life within the river system. The ecology of the river would be seriously impaired, bird life which feeds on the aquatic species within the river would disappear, and the toxic stream would make its way into the Swan where it would have a similar effect.

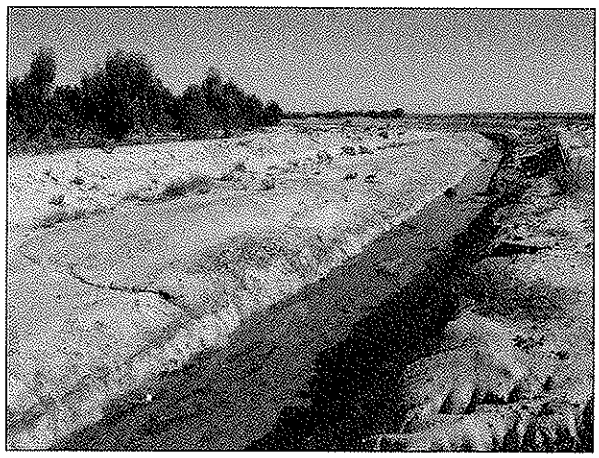
Suggestions by the WACMG that the highly saline groundwater would be 'watered down' by the addition of fresh water flows from the major tributaries of the wetter Avon region, ignores the fact that such flows would only occur during the wetter months of the year, whereas groundwater from deep drainage would be flowing continuously, both summer and winter.

As an alternative, the CSIRO report has suggested that, in the 108 catchments identified within the greater Avon basin, drainage might be an option if each catchment acted separately and where ground water could be collected in evaporative basins at the outfall of each catchment and either left to evaporate or utilised in some manner.

A separate report prepared by the Environmental Consultancy, GHD, relating to a proposal by the WACMG to cut a 35 km drain alongside the environmentally fragile Yenyening Lakes system, south-east of Beverley, was also presented at Greenhills. This report demonstrated conclusively that the deep drainage proposal was not environmentally viable and would adversely affect the biodiversity values of the Avon River.

All in all, the science is well and truly out and it shows that the downstream impacts of deep drainage would not be environmentally sustainable. What happens now in the long-running drainage debate will be up to the new Wheatbelt Drainage Council headed by former National Party leader, Hendy Cowan.

But as the Greenhills meeting ended, there were plenty of landholders who still thought that the preferred option would be the simplest and easiest way for them. That is, draining directly into the streams and waterways of the Avon basin and letting the water run directly to the Avon River, the Swan River and out to sea.



A section of the Narembeen Deep Drain taking saline/acidic groundwater across 30km of farmland, and which eventually diascharges into a bush reserve. (Photo: T. Clack)