

STATE SALINITY COUNCIL

Newsletter of the Western Australian State Salinity Council

October 1998

Progress on Salinity Plan Update

Agency staff and community members have been busy reviewing written submissions in the last month to determine what changes, additions and revisions need to be made to the 1996 Salinity Action Plan.

The Salinity Council and Reference Group are keen to see the Plan move from a government document to a document owned jointly by the community and government.

The updated Plan is beginning to take shape and the Reference Group and Salinity Council have reviewed and commented on the document at recent meetings.

A 'vision' will be included in the updated Plan, as well as a foreword and introduction to outline the update process and highlight the key changes and additions.

One key addition will be information on the use of saline land for both productive purposes and for its environmental values. Coastal and irrigation salinity will also be included in the Plan, as will a new chapter on research and development.

Sections on communication, technology transfer, cultural change and education will be added to

Chapter 4. Chapter 5 will include a better description of priority catchments and the links to regional strategies.

Several other sections have been updated, including the text on drainage, monitoring and evaluation, and the structure for implementation of the Plan.

Emphasis on the use of woody perennials has been retained, but the importance of other water management options has been elevated to give balance to farming systems.

The Reference Group and Salinity Council have changed the completion date for the update project from mid December to early March. This allows a full eight-week public review period and enables the Council and its various support groups to better fine-tune the document before the public review period.

A document listing all the written submissions along with a response is also being compiled at present, and will be released at the start of the public review period.

The public review period will be from late October to mid December 1998.

High water use farming systems in the wheatbelt

While most wheatbelt farmers can't get enough rain for their crops, there is plenty making its way into the groundwater system. This has sparked considerable interest in high water use plants.

Annual crops may not have sufficient water in the growing season, but are rarely capable of using all of the rain that falls in a year. This is due to several factors including out-of-season rain in summer and autumn, and water moving below the root zone of crops.

The end result is water moving into the groundwater contributing to rising water tables and the potential outbreak of salinity within the landscape.

Agriculture Western Australia has employed development officers to help farmers adopt high water-use systems, which can use water not accessible to annual crops and pastures.

By utilising more of the yearly rainfall, perennial systems should be able to lift total production throughout the year. Perennial options being considered by wheatbelt farmers include oil mallees, pines and perennial pastures.

Lucerne is one of the alternatives, with many farmers (particularly those in focus groups) opting to trial the crop on a small scale, and if successful expand their plantings in future years.



Oil mallees planted as a tree crop on a wheatbelt farm

Further development and refinement of lucerne systems will come from the development of a database of information characterising the Land Management Units for the production of lucerne.

This pool of knowledge and grower experience will be a key tool in the development of recommendations for profitable, sustainable farming systems that incorporate lucerne throughout the region and the State.

Continuous development of high water use systems is planned through cooperative on-farm development. This will be an ongoing process, which will lead to the development of a range of robust sustainable systems.



Performance of salt tolerant trees and shrubs put to the test

The battle against degradation caused by spreading salinity has spanned four generations of the Davey family of Wongan Hills. Maitland and Margaret Davey have been farming their ancestral 2,500 hectare farm for 31 years, and are now joined by their son Nathan and his wife Kylie.

The Davey's are members of the Gabby Quoi Quoi catchment group, one of six farmer catchment groups participating in the Alcoa sponsored accelerated land rehabilitation program.

One of the group's projects has been the establishment of a five hectare arboretum on a saline creekline to demonstrate the performance of a variety of trees and fodder bushes. A total of 1,393 trees and 3,548 saltbush plants have been planted in the area.

Piezometers are located throughout the trial to monitor the water table level and water quality. At present, the depth of the water table ranges from 80cm to 1.3 metres.

Farmers travel from all over the agricultural region to inspect the arboretum to see what tree and shrub species survive best in salt-affected areas.

Mr Maitland said the tree and saltbush trials were monitored for effectiveness of establishment, insect control, life span, limb losses, grass cover beneath the canopy, sheep grazing damage, flower seed and potential wood production.

"When inspecting the trial, farmers are most interested in the stronger type of trees and shrubs that could withstand saline conditions, and the high performing fodder plants," he said.

"The trial helps farmers to short cut what to plant and what establishment method to use when treating similar problems on their farms, saving them time and precious financial resources," he said.

Maitland and Margaret Davey (see below) are regarded as leaders in their efforts to halt the spread of salinity in the Gabby Quoi Quoi catchment.

In 1996, the Gabby Quoi Quoi Catchment Group joined with the other six farmer catchment groups participating in the accelerated program to form a not-for-profit touring business called Landcare Vision.

Formed in association with Alcoa and Agriculture WA, the aim of Landcare Vision is to provide farmer-guided tours to their farm demonstration sites.

The tours highlight the advantages of working together, of cooperative planning, and of implementing integrated landcare programs across farm boundaries.

The six farmer catchment groups involved in the program are West Dale near Beverley, Morbinning and South Yoting near Quairading, Yeelanna near Trayning, South Tammin and Gabby Quoi Quoi.

For further information on the Landcare Vision tours contact Landcare Vision Manager Fay Chatfield on tel: 08 9637 1060.



Kent Foreshore survey and fencing program

In the next few weeks 19 landowners along the Upper Kent River will be invited to join in a project to fence 48 kilometres and revegetate 83 hectares of river foreshore.

This flagship 'on the ground' project for the Kent potable water supply recovery catchment has been sparked by a recent survey that found 59% of foreshore on the main channel and major tributaries of the Upper Kent River was badly degraded.

The survey of 126 kilometres of foreshore, jointly funded by the Kent LCDC and the Water and Rivers Commission, showed that a mere 8% was in near pristine condition, and that only 67% was fenced.

Kent Recovery Team Chairman Rob Webb said the foreshore rehabilitation project would provide long and short-term benefits for both farmers and the wider community.

"Our long term aim is to protect future water supplies by reducing stream salinity to potable levels by 2030," Mr Webb said.

"Fencing and revegetation will stabilise eroding riverbanks, establish riparian wildlife corridors and help control saline seepages into the river.

This will improve visual amenity and benefit the ecology of the river."

The Water and Rivers Commission will pay for fencing materials and plants, and hopes to involve a Green Corps team early in 1999 to help farmers erect fencing and revegetate foreshores.

Commission Regional Manager Naomi Arrowsmith said the project's success depended on cooperation from farmers who would benefit directly from the rehabilitation work.

"In the near future we will also be offering farmers financial assistance as an incentive to fence off significant areas of remnant vegetation," Ms Arrowsmith said.

For further information and copies of the survey report contact the Commission's Albany office on telephone 08 98 425 760.

Land for Wildlife

Private landowners from Geraldton to Esperance have set aside more than 16,000 hectares for nature conservation under CALM's Land for Wildlife initiative.

The area is included in nearly 30,000 hectares of remnant vegetation on 159 properties registered with the scheme since it was launched last year.

Environment Minister Cheryl Edwardes said the degree of enthusiasm with which landholders have adopted Land for Wildlife reflects the high level of interest in incorporating nature conservation strategies in landcare projects under the Salinity Action Plan.

"It shows that people are very much aware that areas of wildlife habitat are an integral part of measures to combat salinity and help restore nature's balance by conserving areas of biological diversity," Mrs Edwardes said.

Land for Wildlife is a voluntary program that recognises the conservation efforts of private landholders and managers and helps them do more to conserve native plants and animals on their lands by protecting, expanding or creating suitable habitat.

The program also allows landowners to undertake sustainable commercial activities in relation to wildlife such as wildflower production and nature-based tourism.

Since Land for Wildlife was officially launched in February last year on Sue and Paul Kelly's Mingenew property (see right), 263 people have expressed interest in being a part of the scheme.

So far, CALM's Land for Wildlife officers have visited 164 properties with a total area of more than 126,000 hectares.

These remnants included a wide range of woodlands such as banksia, jarrah, marri, York gum, salmon gum, wandoo, sheoak, tuart, paperbark, yate and gimlet, along with areas of jarrah and karri forests. There were also distinctive features such as granite outcrops, watercourses, wetlands, heathlands, shrublands, thickets and mallees.

Mrs Edwardes said initiatives through Land for Wildlife would increase the impact of CALM's major native fauna conservation program, Western Shield.

Landowners interested in joining Land for Wildlife can contact their local CALM office or Penny Hussey at CALM's State Operations Headquarters in Como on (08) 9334 0530.



Goodlands Environmental Link

The Goodlands Land Conservation District Committee have finalised work on an arterial vegetation corridor to help manage salinity, surface water run-off and periodic flooding.

The 'Environmental Link' has been established in the Yarra Yarra Catchment, and is the result of more than 10 years effort by local community members.

The Yarra Yarra catchment is approximately 60,000km² and is characterised by a series of interconnected salt lakes, broad braided streams and unconnected salt lakes. This lake system terminates in the Yarra Yarra Lake system near Carnamah.

The lake and stream system provides flow regulation and the Environmental Link has been designed to facilitate this process during peak events. The corridor also works to reduce groundwater recharge through enhancing the waterways and regulating surface run-off from common catchments.

Agriculture Western Australia landcare development officer Nancye Gannaway said one of the first priorities for the area was to conduct water control works in tandem with neighbours to prevent water being deposited in inappropriate places.

The Goodlands LCDC became a focus catchment working with Agriculture Western Australia and the Water

and Rivers Commission to investigate the hydrological system that functions in the catchment.

LCDC member Max Hudson said one of the most important recommendations to come out of this process involved the creation of bush corridors throughout the catchment. Group members worked together to identify streamlines and to establish a system of levee banks around the streamlines.

"The waterways created in this fashion are up to 50 metres in width and are flanked on either side by 40 metres of native vegetation," Mr Hudson said.

This vegetation is being established by the individual farmers using local native species and is expected to increase the use of ground water that would ordinarily enter the drainage system.

Mr Hudson said the new surveyed waterways were also used to link 'patches' of remnant vegetation and to create wildlife corridors utilising more than 60 kilometres of fencing.

"With a community waterway established it is now possible for catchment group members to initiate water regulation systems without the risk of flooding down stream neighbours."

More focus catchment groups

Agriculture Western Australia had a strong response to its call in August for new focus catchment groups to strengthen efforts against salinity in the Northern Agricultural Region.

The groups are an integral part of the agency's ongoing commitment to reduce the impact of salinity on agriculture and the environment.

Regional Landcare officer Don Cummins said focus catchment groups pooled the resources of local farmers and Agriculture Western Australia to tackle salinity issues at the catchment level.

"We have had four groups taking part in the program in the Northern Agricultural Region. We plan to take on board another two groups this year, and a further four groups in 1999," Mr Cummins said.

"Salinity is a problem which cannot be fought alone. The focus catchment program provides professional support teams to assist farming groups.

The process involves farm and catchment planning which utilises the skills and abilities of landholders and technical advisers from Agriculture Western Australia to address whole catchment issues," he said.

First land purchase under salinity action plan

The Federal and Western Australian Governments have joined forces to purchase a piece of land in the wheatbelt as part of their commitment to tackling the State's salinity problem.

The 726-ha block — adjoining North Tarin Rock Nature Reserve near Lake Grace — is the first piece of land bought under the Salinity Action Plan, which includes a program to protect areas of remnant native vegetation and integrate management.

The uncleared block increases the size of the North Tarin Rock Nature Reserve by more than 50 per cent and will improve the viability of the nature reserve.

A \$52,800 contribution from the Natural Heritage Trust under the National Reserve System program and \$26,400 from the State Government funded the purchase.

The block adds under-represented vegetation types to the National Reserve System, including shrublands and salmon gum woodlands. Surveys by CALM have identified the rare native plant *Kulin conostylis*, previously known only from a reserve 20 kilometres to the north, and other plant species on CALM's priority list.

The area is a significant habitat for priority native species such as the Carnaby's cockatoo, tamar wallaby, malleefowl and western brush wallaby.

It will also help to control salinity, complementing other work being done in the catchment area by landowners.

The land is along a watershed and plays a significant role in reducing the amount of water recharging groundwater tables in two separate catchments.

Nursery expansion to fight salinity

Seedling production at CALM's Plant Propagation Centre at Manjimup will more than double to help fight salinity.

The centre will be expanded in an \$8 million redevelopment plan that will increase the number of seedlings produced each year from 23 million to more than 55 million.

The development of the site is part of a program that will have major landcare benefits in the agricultural regions.

These include the Maritime Pine Project that aims to establish more than 150,000 hectares of pines and native trees on cleared farmland over ten years.

CALM research has revolutionised plant propagation techniques over the past few years. For example, seedlings are now produced from cuttings taken from genetically superior 'mother plants' rather than direct from seed.

This means genetic gains will be passed on to tree growers much more quickly than by using traditional methods.

There are currently around 400,000 'mother plants' growing in hedges at the nursery and a further 200,000 are being planted out this year.

Other seedlings being produced include eucalypt hybrids, including a river red gum-Tasmanian bluegum cross and a Tasmanian bluegum-flooded gum cross, that have a higher salt tolerance than pure species and will enable CALM to extend the range in which hardwood suitable for pulp logs can be planted.

Construction of the new facility is due to start later in the year. When complete, an additional 20 full time staff will be employed, together with an extra 45 part time staff during peak times.

Salinity Council Newsletter — Contributing to WA's Salinity Action Plan

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