STATE SALINITY COUNCIL
Newsletter of the Western Australian State Council
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Update for Salinity Action Plan

The Salinity Action Plan is to be updated to ensure it continues to meet community and government expectations in combating salinity.

State Salinity Council chairman Alex Campbell said the update would provide the opportunity for any interested group or individual to help in the ongoing development of the plan.

"As foreshadowed when it was released in November 1996, the Salinity Action Plan needs to be dynamic and continuously developed to respond to changing circumstances and technology," Mr Campbell said.

"I believe the framework developed for managing salinity under the Salinity Action Plan is a good one and I don't think we'll see a major shift in our fundamental approach.

"But a careful look at our experience gained over the past year and input from the community can only help make the plan stronger.

"The update will determine who are the major users of the plan and ensure that it is presented in a format that fits their needs.

"It will help to better achieve the plan's objectives by updating information, including new developments and technologies and addressing any issues omitted from the present plan."

Mr Campbell said another aspect of the review would be to draw clear links between the Salinity Action Plan and other natural resource management programs at state, regional and Commonwealth levels.

The update process was being developed by the Council with significant input from the Salinity Council Reference Group — comprising community and government representatives — which was established to allow stakeholders to advise the Council on a range of issues.

The update would begin with targeted community consultation through existing networks such as catchment coordinating groups.

A series of meetings across the South West is proposed to receive input and advise on procedures for written submissions. A revised draft plan would then be released for wider public comment.

The update was expected to be completed by November 1998 — the second anniversary of the plan's launch by Premier Richard Court.

Mr Campbell said that while the update was being conducted it was critical that momentum was not lost with on-the-ground action in salinity management.

Environment Minister Cheryl Edwardes, (front right) with members of the Morbinning Catchment Group, during the Minister's recent tour of the catchment.

Many hands in landcare action

The Morbinning Catchment Group east of Beverley is one of six wheatbelt catchment groups participating in a unique cooperative venture with Agriculture Western Australia and Alcoa of Australia Limited to implement an accelerated land rehabilitation program.

More than 100 farming families have been involved in the program that has enabled 15 years of work to be squeezed into five years.

By working together the six catchment groups have established models of successful landcare techniques that can be copied in other agricultural areas throughout WA.

This cooperative community action has now become one of Australia's most successful demonstrations of landcare in action.

In an effort to share their knowledge and experiences with other farmers, the six catchment groups have formed Landcare Vision, a not-for-profit touring business to provide farmer-guided tours to their on-farm demonstrations sites.

Tours are conducted to the catchment groups of Morbinning near Beverley, West Dale where the Dale River crosses the Brookton Highway, South Yoting near Quairading, Yeelanna near Trayning, Gabby Quoi Quoi near Wongan Hills and South Tammin.

Highlights of the tours, which are offered to farmers and landcare groups, show the advantages of farmers working together, and demonstrate the benefits of cooperative planning and implementing integrated landcare programs across farm boundaries.

The Morbinning Catchment Group gave an impressive insight into their landcare work to Environment Minister Cheryl Edwardes, when she visited their farms last month.

Farm forestry project monitors seepage control

Boyup Brook farmer Ian Purse has planted Tasmanian bluegums in a project that will accurately gauge their effectiveness in combating rising watertables.

Ian — who is chairman of the Farm Forestry Development Group and a State Salinity Council member — noticed that parts of a catchment in his farm had broken out into seeps which demanded action to control rising watertables.

Not wanting to lose valuable grazing land that carries good quality clover and mixed grasses, Ian contacted CALM and Agriculture Western Australia for advice on how trees could be used to contain the problem.

The CALM Farm Forestry Unit agreed to coordinate an investigation of the area as a farm forestry project.

The area's soils and groundwater were mapped and integrated with a farm and landscape management plan.

The completed design formed the basis for planting high-water-using bluegums (*E. globulus*) for maximum effect.

To date 35 ha of bluegums have been planted on areas of recharge and Ian is monitoring ground water levels from 12 piezometers installed by Agriculture Western Australia.

Data from this and other farm forestry projects (ground water and salinity levels) will be made available to the community by Agriculture Western Australia.

The trees are planted by CALM Sharefarms on a crop share basis. This unique arrangement saw farm planning and native trees planted at no cost to the landowner.

Ian is fencing the areas of planted trees that also include remnant vegetation, as part of a long term aim to fence corridors and remnant bush. He also wishes to establish deep-rooted perennials (lucerne) with the trees to provide a long term sustainable farm system.

Ian said he was pleased to be involved as a landholder in one of the first joint CALM/ Agriculture WA/landholder projects that will provide valuable data on the role of trees in combating the problem of rising levels of saline ground water.

The trees are expected to show their lowering effect on the watertable in three to four years.

Ian Purse (centre), East Boyup Catchment, shows members of a Trees South West field day his 16-month-old Tasmanian bluegums planted to arrest rising watertables.

Salinity under spotlight at West Dale

From left: West Dale Catchment Group farmer, Helen Schilling with Agriculture Western Australia's Landcare Development Officer, Rob Edkins, West Dale farmer Judy Schilling and Heidi Graeffe, hydrologist exchange student from Sweden.

A Water and Rivers Commission information session in Northam inspired a West Dale Catchment Group farmer to find a new way to encourage farmers and government agencies to work together to fight the spread of salinity.

Helen Schilling approached the Commission and helped devise an exchange student initiative that has, after placing an advertisement on the internet, resulted in Swedish hydrologist Heidi Graeffe working with the catchment group.

Over the next six months Ms Graeffe will divide her time between conducting groundwork with the farmers and working with staff in the Commission to interpret the data collected.

Since arriving in WA on 2 February, Ms Graeffe has been busy sourcing data on rainfall in the catchment, piezometer readings, clearing history, the topography, the rehabilitation work being done and information collected through electromagnetic and geophysics surveys.

Ms Graeffe said the project involved a detailed study of the West Dale catchment and the salinity problem from the hydrological view.

"By the end of the project I hope to be able to advise the farmers on how best to manage the problem," Ms Graeffe said.

The six-month program forms part of Ms Graeffe's honours studies for her degree in Natural Science.

For more information on Ms Graeffe's work contact Helen Schilling on tel: 08 9647 1013 or Phil Commander at the Water and Rivers Commission on tel: 08 9278 0300.

Project to give salinity big picture

The Western Australian and Federal Governments will contribute $7.5 million over the next three years to monitor salt-affected land and predict areas at risk of salinity in the southern part of the State.

Deputy Premier Hendy Cowan said Natural Heritage Trust funds of nearly $4 million had recently been approved for the project, which for the first time would provide a comprehensive large-scale picture of salinity across the entire region.

Farmers will have access to more accurate and detailed land contour information (at one to two metre intervals) which will help with farm and catchment planning.

Mr Cowan said the project would use satellite data archived back to 1987 to monitor and predict changes in salt-affected land and monitor remnant vegetation and revegetation by landholders in the 24 million hectare area.

The project would involve Agriculture Western Australia, the Department of Land Administration, CSIRO, Conservation and Land Management, Department of Environmental Protection and the Water and Rivers Commission.

Mr Cowan said the project would help confirm the positive impact of the Salinity Action Plan over its 30-year timeframe.

"This important project will forecast the challenges that Western Australia faces in dealing with salinity and the potential extent of the problem in the future if it is not addressed," Mr Cowan said.

"Collaborative research developed under the National Dryland Salinity Program will use a range of tools such as Landsat imaging, digital terrain models and surface water accumulation models which will be used to map salinity in the South-West.

"The project will also produce maps showing progressive changes in the amount and quality of remnant vegetation and the change in revegetated areas such as bluegum and pine plantations."

SALTMAP assessment released

The Water and Rivers Commission says it will continue to evaluate airborne electromagnetic surveys as a tool in salinity management after releasing its assessment of the SALTMAP system.

Commission chief executive Roger Payne said the Commission's assessment of a 1993 trial was part of its work with Agriculture Western Australia in combating dryland salinity and was continued under commitments in the Salinity Action Plan.

SALTMAP is an airborne electromagnetic survey system developed by a private company, which aims to identify areas of high electrical conductivity which are potential areas of salt concentration.

A trial project was run with local farmers west of Broomehill over an area of 46,500 hectares, known as an extreme salinity hazard zone.

The Water and Rivers Commission "groundtruthed" the SALTMAP aerial survey through a drilling program, field inspections and an analytical overview.

Mr Payne said the review showed that SALTMAP was not comprehensive in identifying all salt hazard sites and some areas identified by the system as having low conductivity in fact were highly saline where there was a thin soil layer above rock.

Mr Payne said that at the time of the assessment, SALTMAP was still being developed and further advances in the technology were being made.

"SALTMAP as it was in 1993 did not present a stand alone tool in salinity management but did add another facet of information for land managers," said Mr Payne.

Bushland balance in salinity solution: EPA

The Environmental Protection Authority is working to give land managers greater certainty in the land clearing assessment process.

EPA chairman Bernard Bowen said the EPA believed bushland clearing was the precursor to many environmental problems, such as salinisation, loss of biodiversity and degradation of land and wetlands.

He said the EPA was well aware of the potential environmental impacts of land clearing but it also recognised that other issues needed to be considered, including equity and the expectations of landholders.

The establishment of an interagency of Understanding on land clearing in March 1997, brought together the decision-making powers of the EPA and the Commissioner for Soil and Land Conservation.

"We do not support land clearing in catchments where groundwater is already rising, salinity is evident and there is no overall catchment management strategy to halt the rise in groundwater," Mr Bowen said.

"The EPA supports the need to develop and implement catchment management plans to help slow down the rise in groundwater levels, and to retain native vegetation wherever possible.

"The EPA recognises there is concern in farming communities and agricultural regions about land clearing restrictions.

"We understand that landholders need certainty about the EPA's position and we are working to clarify it for them.

"In particular, proposed amendments to the Environmental Protection Act will provide landholders with a quick 'no' to save everyone's time and money when it is obvious to the EPA that a land clearing proposal is environmentally unacceptable."

Mr Bowen said that in these situations the EPA's decision would be based on an appraisal of the referral information.

"Once the referral information had been considered, the EPA would prepare a publicly available statement of advice to the Minister setting out its reasons for this advice. It would be open to appeal for 21 days," he said.

Mr Bowen emphasised that the EPA was sympathetic to the position faced by some landholders and said it recognised the difficulties and uncertainty many landholders felt.

Chairman Bernard Bowen

Survey picks up rare find

An apparently new species of grevillea has been discovered south of Hyden in the first round of sampling under biological surveys linked to the Salinity Action Plan.

Survey work began last year in the central Wheatbelt with 67 wetland areas sampled during spring and autumn.

The Department of Conservation and Land Management has compiled a complete set of previously prepared biological surveys and WA Museum records of mammals, lizards, frogs and selected invertebrates have also been compiled.

A complete list of Wheatbelt flora — more than 3000 species — will be prepared to determine their conservation status and the threats from rising groundwater and/or rising salinity levels. Much of this work will be done by long-term consultancies.

More than 200 plant quadrats and 100 animal quadrats (pitlines and invertebrate traplines) were sampled in 1997.

Preliminary data suggest that adequate information on lizards, Dasyurids or small carnivorous mammals, spiders, centipedes and scorpions have been obtained.

More than 100 taxa of spiders have been identified and a reference collection has been established.

Other biological survey work funded by Environment Australia is under way in the 15 reserves comprising the Muir-Unicup wetlands which is a recovery catchment under the Salinity Action Plan.

A preliminary vegetation map has been compiled for all reserves and detailed flora lists prepared for each reserve. Lake Muir Nature Reserve, for example, now has a known flora of 604 species, including three declared rare species.

Very large populations of the declared rare aquatic plant, *Schoenus natans*, were found in the area over six reserves. Two populations of the rare orchid, *Caladenia startiorum*, were also located.

Other discoveries were the Hyden grevillea, new populations of the declared rare species, *Calectasia arnoldii* and the recording at Dryandra of *Templetonia drummondii*, previously thought to be confined to the Darling scarp.

Pine project offers planting options

The massive Maritime Pine Project launched to help reach the Salinity Action Plan's planting target of an extra three million hectares of trees and shrubs, is not just about pines.

In fact, the Department of Conservation and Land Management's Maritime Pine Project includes acacias, eucalypts and melaleucas.

More than 30 native tree species have been selected as part of the package offered to private landowners joining the sharefarming project.

This means landowners can put trees on land too saline or too rocky for pines, as well as in areas where they would prefer native trees for landscaping reasons. Extending the area of trees planted will also increase the landcare benefits to landowners.

The Maritime Pine Project aims to plant up to half a million hectares of *Pinus pinaster* as commercial crops.

Any deep-rooted tree or shrub will help lower watertables — and prevent salinity levels from rising — but landowners can't afford to plant all the trees required unless a significant proportion is grown commercially.

Fast growing bluegums are already established as a tree crop in Western Australia, but the eucalypt is not suitable on deep soils in the medium rainfall zone where maritime pine grows well.

Maritime pine also thrives on the coastal plain north of Perth — the reason it was chosen for the Gnangara pine plantation in the 1920s.

The deep sands or sandy ridge soils being targeted for maritime pine are usually unsuitable for traditional crops and pasture and are susceptible to wind erosion.

A maritime pine crop will boost farm income, help lower the watertable, prevent soil erosion and provide shade and shelter for other crops and stock. A strategically located tree crop will also minimise excess fertiliser run-off, not only improving the soil, but reducing the problems caused by nutrients leaching into streams and rivers.

In 1994, CALM set up the first of its Maritime Pine Sharefarm units, to plant tree crops with private landowners on the west coastal plain.

The Perth-based unit planted nearly 300 hectares of pines in its first year of operation and a second unit was established in Albany in 1996.

CALM has now planted more than 2000 hectares of pine sharefarms on private land from Lancelin to Wandering and the South Stirlings area.

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

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