

# STATE SALINITY COUNCIL

Newsletter of the Western Australian State Salinity Council

April 2000

## 'Salinity affects the whole community'

The newly released Salinity Strategy is a realistic approach to salinity management over the next three decades, according to State Salinity Council chairman Alex Campbell.

The Strategy, launched on April 2 by Premier Richard Court, points out that salinity is a problem for all Western Australians, not just landowners or rural communities.

It involves a joint effort on the part of government, industry, farmers and the community over the next 30 years, based on new research that shows action is needed sooner, and across more of the State, than indicated in the 1996 Salinity Action Plan.

Mr Campbell said the Salinity Strategy involves a range of options and tools to manage salinity including better land management practices, native vegetation management and revegetation and engineering solutions.

"Community action – including the involvement of conservation groups – is a major part of the Strategy and one of the most powerful tools available to fight salinity," he said.

Mr Campbell emphasised that the Salinity Strategy was the result of extensive consultation throughout the community during the State Salinity Council's review of the 1996 plan.

The Strategy addresses the issue of funding, with direct and indirect beneficiaries identified in a cost-sharing model.

Direct beneficiaries are identified as private and public landholders, whose potential income and capital value would be increased by successful action on salinity.

Indirect beneficiaries are identified as the general community who would enjoy the economic benefits of better agricultural practices, the environmental benefits of improved biodiversity, and the recreational benefits of land unaffected by salinity.

The Salinity Strategy proposes a combination of government funding, corporate funding, public contributions and landholder contributions.

Two associated documents – an actions list and a guide for landholders – were also released on the same day as the Salinity Strategy.

Deputy Premier Hendy Cowan also released two reports related to management of the impact of salinity prepared by the Native Vegetation Working Group and the Deep Drainage Working Party.

## Special edition

This issue of the State Salinity Council Newsletter has been published to co-incide with the release of the Salinity Strategy.

The strategy has been put together following extensive consultation, and with the help of Agriculture Western Australia, the Departments of Environmental Protection and Conservation and Land Management, and the Water and Rivers Commission.

This issue outlines the progress made by each agency since the West Australian Salinity Action Plan was released in 1996, as well as other projects underway involving salinity-related issues.

## New Council announced

Deputy Premier Hendy Cowan has announced a new and expanded State Salinity Council.

The Council has the job of providing strategic advice to the Cabinet Standing Committee on salinity management; to coordinate decisions and activities between stakeholder groups; and to monitor and evaluate the success of the Salinity Strategy.

Mr Cowan said the review of the 1996 Salinity Action Plan identified strong community involvement as an essential component for future salinity and natural resource management in Western Australia.

**Story continues page 8**



Landcare winner Kim Diamond

## Diamond comes up trumps

Kim Diamond says he's been "fiddling with salinity for 35 years". And last month he was rewarded for his efforts by winning the national Individual Landcarer of the Year Award. Salinity affects about a quarter of his 2000 hectare mixed cropping and livestock property at Buntine. Kim worked closely with Clive Malcolm of Agriculture Western Australia and others in developing techniques for establishing saltbush and working out grazing management.

He now manages 500 ha of saline land supporting diverse pasture that includes saltbush, balansa clover, Acacia saligna, and perennial grasses. "I've learnt to live with salinity and make the most of it," he says. Other WA Landcare winners were Colin and Margaret Tonkin, who won the Natural Heritage Trust Rivercare Award for their Collie property which shows the advantages of managing a riverside zone within a total farm system.



# Salinity tackled on multiple fronts

Agriculture Western Australia has concentrated its efforts on increasing water use in areas of rising watertables; developing new technologies for assessment and monitoring; and working with local communities.

## Increasing water use

Increasing water use in the landscape can delay or help overcome problems of rising watertables and this is being addressed through development of perennial pastures such as lucerne, with funding provided by the Grains Research and Development Corporation (GRDC).

Development and demonstrations of sustainable grazing systems are also being provided with funding from Meat and Livestock Australia as part of a national project.

Stricter procedures have been established for clearing of remnant vegetation with the onus on land owners to prove that any land clearing would not cause land degradation.

In 1998-99, for example, the Commissioner for Soil and Land Conservation approved clearing of only 410 ha of agricultural land.

## Drainage

New streamlined assessment procedures for group drainage projects and drains discharging into evaporation basins were circulated to Land Care District Committees (LCDCs) and Community Landcare coordinators early in 1999.

Long-term assessment is limited and new trials are commencing to evaluate effectiveness of deep drains to reduce watertables and increase production.

## Individual farmers

REX (Revegetation Expert system) has been developed and released on compact disc for use by individuals and groups.

A farm forestry advisory service has been developed with CALM and is working very well through provision of Tree Notes and other communications activities.

## Communities

Focus catchment plans have been completed for 26 catchments and in progress for a further 32. Another 31 communities are expected to become involved during 2000 (see separate story).

Agriculture Western Australia has assisted CALM with the development of their recovery plan for Toolibin Lake by providing hydrological studies using airborne geophysics, and drilling and designing the surface water management system.

## Rural Towns Program (RTP)

Twenty nine towns are now involved from Mullewa in the north to Cranbrook in the south and inland to Merredin.

Towns in the program have developed a salinity management strategy.

Six towns are now undergoing economic assessment of the costs and benefits.

A community bores project, involving hydrological studies and groundwater modelling for other towns, fully funded by RTP, will begin in the next few months (see later story).

## Monitoring and evaluation

Satellite imagery is being used under the Land Monitor program to provide maps of saline land and vegetation in agricultural areas.

Results from a third of the target area are now available and the balance should be completed by June 2001.

Satellite images are combined with data elevation modelling (DEM) based on aerial photographs that should be completed by December 2000.

This is proving a very valuable tool for planners and engineers as it provides contour maps of much greater accuracy than previously available.

Long-term groundwater monitoring network has been extended and information stored through the AgBores and ComBores databases.

A comprehensive analysis of groundwater status and trends in the

agricultural region has been undertaken as part of the National Land and Water Resources Audit.

The planning tools, AgET and CATCHER, were developed and validated for the Blackwood catchment.

They are now ready to use interactively with farmers and groups to evaluate the impact of catchment plans on groundwater conditions and salinity.

The FLOWTUBE model has been used to assess the changes in recharge required to effect a significant change in the final extent of salinity.

A study to determine the extent and causes of salinity on the Coastal Plain was completed and the information provided input to review of the Salinity Action Plan.

Saltwatch has been established to collate and update all historic and current agency groundwater data unavailable in digital format.

Ongoing development of AgBores and ComBores is being addressed.

The project is also providing community support for groundwater analysis using ComBores.

## Blackwood farmers finalise action plans

Farmers in the Blackwood Basin recently received a boost to their efforts in implementing sustainable management practices as the Lower Balgarup, Byenup Hill and Fence Road Catchments finalised development of Catchment Action Plans.

The Focus Catchment process involves groups developing strategic long-term plans that will help guide management of their catchments.

The plans are part of the Government's commitment to long-term salinity planning and play a vital role in the delivery and implementation of the State Salinity Action Plan.



# Rural towns begin drilling program

Almost 300 bores are to be drilled in 23 rural towns across Western Australia over the next few months to gather information to help tackle rising watertables and salinity.

The project is among several studies being undertaken throughout the State by Agriculture Western Australia to arrest the impact of salinity on rural towns.

The \$800,000 Community Bores Project is expected to get under way in May and finish by the end of this year.

A network of bores would be used to assess and monitor the groundwater systems under the townsites.

The information produced by the bores would then be used to construct a computer groundwater model for each town.

The groundwater model will help the towns decide which treatment will be the most effective in their circumstances.

The project is part of the Rural Towns Program (RTP) which now involves 29 towns across the agricultural region of WA, many of which have less than 1500 permanent residents.

Project Manager Mark Pridham from Agriculture Western Australia said that because towns were small, it did not mean they had small problems.

Some were situated in large catchments



Bore program underway ...Agriculture Western Australia's Ben Whitfield (right) helps contractor Max Harris drill a bore at Dumbleyung as part of the Rural Towns Program.

or underlain by complex geology; two factors which contributed to salinity problems that were difficult and expensive to remedy.

Initial funding arrangements from the RTP required matching funding from shires, which limited access of some small communities to the program.

Under new arrangements, salinity research and investigation activities - such as the Community Bores Program - will be undertaken and funded.

"One of the difficulties we face is that in some sections of the community, people are unaware of the problem which is literally beneath their feet," Mr Pridham said.

"The idea behind the Community Bores Project is to raise community awareness and also give towns a decision making tool which will help them choose the most effective salinity management treatments.

"Many towns are vulnerable to rising groundwater because they sit along railway lines which were often located low in the landscape," Mr Pridham said.

Towns from Mullewa to Cranbrook and inland to Merredin are involved in the program which aims to provide a structured approach in tackling the salinity problem.

By taking over the essential, but expensive groundwater research and investigation role, the RTP enabled local communities to concentrate their efforts and resources on the subsequent on-ground works.

Several towns have now moved into the works implementation stage.

Since January, six towns which had already acquired considerable groundwater information through their own efforts have been involved in an Economic Impact of Salinity study initiated by the RTP. These are Brookton, Corrigin, Cranbrook, Katanning, Merredin and Morawa.

Work in Merredin should be completed by the end of April, while groundwater modelling for Katanning and Cranbrook has commenced.

## Local communities take the initiative

Twenty six focus catchment plans have now been completed by Agriculture Western Australia in the South-West Agricultural Region, stretching from north of Mullewa to east of Esperance.

Another 32 plans are being serviced and a further 31 due to begin this year.

Some catchments were comparatively large areas but had low populations such as Dalyup River near Esperance, while others in the west of the region were much smaller but supported larger numbers of people and a diversity of industries.

The catchment planning process involves three stages: development, focus and implementation.

Selection of a Focus Catchment depends on three criteria: degree of natural resource degradation; public

assets at risk; and level of community group activity.

In some cases, significant public assets might be at risk, but no community group has formed.

Once the community chooses new Focus Catchment Groups, they receive priority technical assistance from AGWEST and the other agencies.

They are taken through a strategic planning process to develop a Catchment Plan to achieve sustainable use of resources and arrest the decline in degradation.

Anyone interested in finding more about the Focus Catchment process should contact the local AGWEST Catchment Support Officer.



# Support for land owners is a priority

Increased support for landowners, the discovery of new flora species, protection of remnant vegetation in new reserves and implementation of recovery actions in four priority catchments for biodiversity conservation are the major results achieved from projects begun under the 1996 Salinity Action Plan by the Department of Conservation and Land Management.

## Biological survey

- The first comprehensive biological survey of the South-West agricultural region began in 1997. The survey includes detailed monitoring of 25 selected wetlands, the collection of baseline information on birds, plants and aquatic vertebrates for over 180 wetlands and the establishment of more than 1000 terrestrial and aquatic monitoring sites. Another 200 sites have been set up on farmland with volunteers from the Wildlife Society.
- To date, the survey has discovered two previously unknown flora species and re-discovered one presumed extinct aquatic plant.
- The survey also shows the region's biodiversity is much higher than previously estimated. Preliminary findings for the areas surveyed have recorded 3000 plant species and about 600 species of spider, compared with previous estimates of less than 200 species for the whole region.
- Databases are being compiled from the survey to aid selection of further natural diversity recovery catchments and guide other actions.

## Farm forestry

- More than 7000 hectares of maritime pine have been planted on previously cleared farmland since 1996, together with 500 hectares of mixed native species.
- Nearly 2500 hectares of oil mallees have been planted by farmers.
- A commercial feasibility study has shown that whole-plant oil mallee feedstock could successfully produce eucalyptus oil, activated carbon and electricity in an integrated tree

processing factory. As a result, funds are being raised to build a pilot factory, probably in Narrogin.

- CALM's Manjimup nursery has been expanded at a cost of \$8 million to increase annual production from about 23 million seedlings to 45 million in 2000 and up to 60 million within a few years.

## Land for Wildlife

- The program was launched in February 1997 and 10 Land for Wildlife officers now provide support for landowners wanting to protect the nature conservation values on their properties.
- By February this year, 581 landowners had applied to join the program and 71 000 hectares of remnant native vegetation were being managed privately as Land for Wildlife sites.
- "Western Wildlife", the program's quarterly magazine, has a mailing list of 700 and a range of other publications has been produced.

## Natural Diversity

### Recovery Catchments

- The priority in these catchments is protecting key wetlands and natural diversity from salinity.
- Four Natural Diversity Recovery Catchments are being managed currently: Toolibin Lake, Lake Muir-Unicup, Lake Warden and Lake Bryde-East Lake Bryde.
- Cleared land totaling 253 hectares in the Toolibin Lake and Muir-Unicup catchments has been purchased and will now be revegetated with local native species to combat rising water tables.
- Activities in the recovery catchments include: consultation with landholders; catchment tours for farmers; farm surveys; native seedling production and collection; plantings; fencing; establishment of deep-rooted vegetation, perennial pasture and saltland revegetation trials; preparation of recovery catchment management plans; dissemination of information and publications; airborne



*A bright future ... yellow eyebright is almost extinct in Victoria, Tasmania and South Australia. The largest known population grows in Western Australia's Lake Muir Recovery Catchment.*

magnetic/radiometric and geophysics surveys; establishment and monitoring of stream gauging stations; piezometric bore audit; aquatic fauna surveys; vegetation and flora studies and hydrological assessment.

## Management of Crown remnants

- Remnant vegetation is vital for biodiversity conservation, and particularly valuable for salinity control where individual remnants are large enough to reduce recharge at a catchment or sub-catchment scale, or where smaller remnants occur on high recharge zones or discharge zones.
- Areas of remnant vegetation totalling 2315 hectares have been protected through purchase for addition to the conservation reserve system. Agreement has been reached with landowners for the purchase of another 1170 hectares.
- Activities since 1996 include revegetation of degraded areas; botanical surveys; weed eradication; rubbish clean-up; fauna surveys; rabbit and pig control; dieback mapping; road and track closures; direct seeding of local native species; seed collection; deep ripping and seed spreading; monitoring of weeds, feral herbivores and germination rates; and liaison with farmers and catchment groups.



# Mallee growers get the good oil

The development of commercially attractive landcare tree crops for the Wheatbelt was a major objective of the 1996 State Salinity Action Plan, giving extra impetus to the oil mallee project initiated by CALM in 1993.

The oil mallee project is now controlled by the growers through the Oil Mallee Association and the Oil Mallee Company.

These groups, in association with Melbourne engineering consultants, Enecon, and CALM, have recently completed a commercial feasibility study with financial support from the Rural Industries R&D Corporation and Western Power.

This study showed that whole-plant oil mallee feedstocks could produce eucalyptus oil (from the leaf), activated carbon (from a select wood fraction) and electricity (from the residue) in an integrated tree processing factory that would be commercially viable.

The study was based on paying the grower of whole mallee feedstock a price that was competitive with the other land use options available.

This is a breakthrough of seminal importance to salinity control.

It demonstrates that a non salt-inducing use of Wheatbelt farmland could be commercially attractive to farmers.

Since all the products coming from this process have large volume markets, mallee factories could be built in large numbers.



*The good oil ... eucalyptus oil from the mallee leaf is being tested as an industrial solvent.*

On the strength of this result, Western Power Corporation has pledged \$2.5 million for a pilot factory and has been working to raise the additional funds. Most of the \$5 million required has now been committed and the factory is expected to be built in Narrogin.

The factory will initially require about 2000 hectares of mallee, rising to 10 000 hectares when the factory reaches full scale.



*Belts of oil mallees planted under the project.*

## Working with the community

Working with landowners is a key element of CALM's Natural Diversity Recovery Catchments program.

Public meetings and catchment tours have been organised and farm surveys have been conducted to provide information to landowners and to raise awareness about the recovery catchments and collate information.

In the Lake Warden Recovery Catchment, for example, about 120 farmers were surveyed on a one-to-one basis and more than 200 property locations across the catchment were mapped.

Altogether, 600 maps have been produced (three maps for each property, including an A3 colour map), depicting information on existing landcare works, proposed landcare works, internal fencelines, areas of salinity and waterlogging, and soil landscapes. The maps provide the information base for "Recovery Farm Kits" for the Lake Warden catchment.

A Recovery Farm Kit manual has been prepared by CALM to help farmers use their farm maps for planning on farm nature conservation works and high water use farming systems.

There have been 150 copies of the manual printed and distributed.

In addition:

- 265 000 native seedlings have been produced for native revegetation;
- 260 kilograms of local native seed have been collected for direct seeding; and
- eight permanent vegetation survey sites and 10 saltland revegetation trial plots have been established.



# Students learn on the land



Above: One of the Glencoe students monitors salinity near Cuballing.

Students at Glencoe Primary School have formed a partnership with the South Pumphrey Catchment Group and are learning about land degradation, landcare, farming and endangered animals. The students are also working with Agriculture Western Australia in Narrogin and the Water

and Rivers Commission at Peel to establish a nursery to grow trees for salt-affected land at Cuballing. The Glencoe Landcare Project started in 1994. Each year, students and teachers visit the old planting sites to monitor progress of their trees and check salinity in adjoining creeks.



Right: An outdoor lesson underway.

## Salt risk picture given for Mobrup

A joint Water and Rivers Commission and community project has helped deliver the most detailed picture yet of salinity in the Warren water resource recovery catchment.

The Commission has developed a salinity risk assessment technique in the Mobrup sub-catchment, which included desk-top study, air-photo interpretation, bore drilling, airborne geophysics, hydrogeological evaluation and computer modeling.

The drilling results provided information on geology, depth to water and bed rock and also water quality variations across the catchment.

Airborne geophysical survey data were useful in mapping the structures and dykes and the images obtained confirmed severe salinity observed in some parts of the catchment.

Commission hydrogeologist Natti Hundi said that the salinity risk assessment methodology provided a good insight into the catchment's hydrogeology.

The complex interplay of geological faults, dykes and surface landscape was described, providing farmers with an explanation of salinity and groundwater movement patterns which had baffled them for years.

"We have presented the results of the study to the Mobrup LCDC and the response from the group was overwhelming," Mr Hundi said.

"Nearly 19 per cent of the 12 000 ha catchment is prone to flooding and groundwater is within two metres of the surface in nearly 30 per cent of the catchment. This is a major concern."

Computer Modeling (M.A.G.I.C.) indicated potential deep groundwater

discharges to occur in the Tertiary sediments which is relatively fresh. The discharge would be at its optimum in about 30 years.

Mr Hundi said the computer model estimated that more than 2 million cubic metres of deep groundwater was discharging each year, so an understanding how and where water moves was essential for salinity management.

"The information from the study is being provided at farm level, but its real value is in showing how the system works at catchment level," he said.

"This understanding is critical, if farmers are to work together to tackle salinity."

The information from the study was being used to develop the Mobrup catchment management plan and techniques tested would be transferred to other parts of the Warren catchment.



# Collaboration is the key to progress

The Water and Rivers Commission - working with the community and other agencies - has made substantial progress in delivering outcomes from the State Salinity Action Plan.

The Commission's key roles under the plan centre on management to protect public water resources from salinity, and providing advice and information to others managing the effects of salinity on land, biodiversity, towns and other infrastructure.

## Water Resource Recovery Catchments

Progress has included:

- Recovery Teams and strategic Action Plans developed for the Kent/Denmark, Warren and Collie Recovery Catchments;
- Support Teams set up in the Albany and Bunbury offices of the Commission;
- demonstration sites in each Recovery Catchment set up to show preferred management;
- water management planning under way in four sub-catchments;
- catchment water balance models developed for assessment of the impact on stream salinity of proposed changes in land management;
- remnant vegetation mapped. Priority areas are being fenced (3380 ha to date) and managed according to Agreements;
- lucerne established on 375 ha to reduce groundwater recharge; and
- management surveys of the Kent and Perup rivers. Fencing of the Kent River is almost complete and 24 ha of foreshore has been revegetated.

## Salinity Risk Assessment

This has been a major initiative with the Commission. Achievements include:

- completion of hydrogeological mapping for the Mount Barker - Albany, Esperance - Mondrain Island, Ravensthorpe, Newdegate, Bremer Bay, Collie, Dumbleyung and Pemberton - Irwin Inlet areas and for the whole of Blackwood River catchment;
- assessment of airborne geophysical information for the Broomehill, Chapman Valley and Lake Toolibin trial areas;

- completion of airborne geomagnetic and radiometric surveys of the Water Resource Recovery Catchments; and
- detailed assessment of salinity risk for the Mobrup catchment

## Water quality monitoring

Monitoring continues to indicate the impact of salinity on rivers, wetlands and public water supplies. This is reported in the "State of Water Resources".

## Other areas

The Commission is also making a significant contribution to management of salinity in other areas:

- Biodiversity Recovery Catchments, especially at Lake Toolibin (with CALM);
- Focus Catchments in agricultural area, especially at West Dale and the West Midlands (with AGWEST);
- rural towns at risk from salinity through the Rural Town Program management committee; and
- potential salinity impact of the Yarra Yarra Lakes on the Moore River.

## Research and Development

R&D continues by assessing long established experimental catchments that show the impact of clearing natural vegetation for agriculture and bauxite mining on salinity.

## Rural drainage

Rural drainage for salinity management is a contentious issue which has entailed the Commission's involvement in the following ways:

- assessing the potential impact of drainage on receiving environments, and on flooding;
- monitoring the effect of drains on water quality in the Tone River;
- preparation of guidelines for assessment of drainage proposals;
- preparation of information and decision-support brochures; and
- coordination of actions for drainage identified in the State Salinity Action Plan.

## Protecting the Kent River foreshores

More than 20 km of the upper reaches of the Kent River and its major tributaries have been fenced and 24 ha of foreshore planted to local species in a Salinity Action Plan project.

The fencing project is one of several initiated by the Kent Recovery Team in partnership with the Water and Rivers Commission as part of the Kent Recovery Catchment Program.

The project follows a survey of the condition of the upper Kent River done by Green Skills for the Kent River Land Care District Committee (LCDC) and the Water and Rivers Commission that identified the state of the river and its fringing vegetation.

The Green Skills' survey recommended fencing and revegetation to protect and rehabilitate the river and riparian vegetation.

The Kent Recovery Team provided fencing materials to the value of \$1000 per kilometre and the 24 500 seedlings required for the revegetation.

The Water and Rivers Commission arranged for a Green Corps team to erect the fence and plant the seedlings.

Kent Recovery Team chairman and local farmer Rob Webb said the program had been well received by the local community.

Ten farmers participated in the project, preparing the fence lines for the Green Corps team by installing strainers and ramming wooden posts.

Several other farmers erected the fences themselves.

Water and Rivers Commission program manager Brett Ward said that once the remaining 10 km of river was fenced this year, the entire river channel of the Upper Kent from Tenterden to where it enters the forest just south of Muir Highway would be protected from grazing.

Mr Ward said agreement had been reached with 19 farmers to fence a further 23 areas of remnant bush.

There are about 218 areas of remnant vegetation in the Upper Kent greater than 10 hectares in size.

Of the larger and higher value remnants, more than 80 per cent had been fenced already, or were on properties planted to bluegums.



# Drainage trial shows significant drop in salinity

Initial investigations by an Agriculture Western Australia researcher in the South West Irrigation Area have shown some startling reductions in salinity and waterlogging after installing sub-surface drains.

Bunbury-based hydrologist Don Bennett began a trial on Todd and Joanne Norton's dairy property at Bengier (in combination with South West Irrigation) in 1998.

Previous trials involving surface drainage, deeper tail drains and trees had been generally unsuccessful across the irrigation area.

The trial involved installing a combination of collector pipes and mole drains one metre below the surface, and 40 metres apart across the irrigation bays.

Half of the 16 ha paddock was drained and half left undrained.

Don said that measurements taken last winter showed the effect on soil salinity was dramatic, with 11 tonnes per hectare of salt being removed through the drain over the first winter.

The system drained more than 5000 cubic metres of water per hectare (500 mm from 990 mm rainfall).

Surface water movement from the drained area was negligible, compared with 388 mm off the undrained section.

This showed that the drainage allowed rainfall to percolate through the soil, removing accumulated soil salts along the way.

The drained area was also much drier during winter, and waterlogging during the summer irrigation cycles was eliminated without any adverse impact on water application.

Improvement in pasture production has been equally impressive, particularly during the first summer.

Normally, soil salinity levels build and cause severe decline of salt-sensitive white clover and ryegrass pastures by late December.



*Big reductions in salinity and waterlogging ... Agriculture Western Australia hydrologist Don Bennett samples runoff at the sub-surface drainage trial at Bengier.*

This year, these pastures continued to flourish on the drained area.

The Nortons have recorded nearly twice as many grazing days for their 160 milkers on the drained area as the undrained area over the irrigation season.

They also commented that pasture on the drained area doesn't seem to show signs of moisture stress as quickly on the undrained, suggesting that the roots are growing deeper into the soil profile.

Pasture quality has also been consistently higher with both energy and protein content being comparatively 5 per cent higher at the last sampling.

## New Council announced

(cont from page 1)

"A key element of this is strong representation on the State Salinity Council," Mr Cowan said.

"The State Salinity Council is fulfilling this important role in leading and supporting the community in addressing salinity.

"I am very pleased to announce the re-appointment of council chairman Alex Campbell and take this opportunity to thank him and council members for the tremendous work done in overseeing the development and delivery of the Salinity Strategy.

"We have recognised the importance of including a broad range of interests in delivering the new-look strategy and so have expanded on the original council structure."

The Council consists of representatives from the following organisations:

- Avon Working Group
- Business in Western Australia, represented by Alcoa World Alumina Australia
- Conservation Council of Western Australia
- Environmental Protection Authority
- Environmental Community Group
- Greening Australia WA
- Indigenous representative
- Irrigation representative (initially from the South West)
- Lands and Forest Commission
- National Parks and Nature Conservation Authority
- Northern Agriculture Integrated Management Strategy Group
- Oil Mallee Association
- Pastoralists and Graziers Association
- Rural Adjustment and Finance Corporation
- Saltland Pastures Association
- Soil and Land Conservation Council
- South Coast Regional Initiative Planning Team
- South West Catchment Council
- Swan Catchment Council
- Water and Rivers Commission Board
- Western Australian No Tillage Farmers' Association
- Western Australian Farmers' Federation
- Western Australian Municipal Association
- Agriculture Western Australia
- Department of Environmental Protection
- Department of Conservation and Land Management
- Water and Rivers Commission

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

This Salinity Council Newsletter is produced with the support of Alcoa of Australia Limited



Department of Conservation and Land Management



For more information please contact:  
Don Crawford Executive Officer, State Salinity Council  
PO Box 6740 Hay Street East Perth WA 6892  
Telephone: (08) 9278 0300 Facsimile: (08) 9278 0587



Department of Environmental Protection



WATER AND RIVERS COMMISSION