Eco Action
Our environment, our future.

STATE SALINITY COUNCIL

Newsletter of the Western Australian State Salinity Council July 2000

Community action recognised

Community groups have been formally recognised in the natural resource management decision-making process with the first signing of an agreement between a community-based catchment group and State Government agencies.

The agreement with the South West Catchments Council (SWCC) is the forerunner for similar agreements throughout Western Australia and gives the SWCC a formal and key role in determining policies and actions for the south-west region.

Deputy Premier and Chairman of the Cabinet Standing Committee on Salinity Management and the Natural Heritage Trust, Hendy Cowan, said the agreement was consistent with the State Government's new Regional Development Policy which sought to give communities a greater role in regional decision-making.

"Local community groups will be driving forces when it comes to determining strategies for natural resource management," Mr Cowan said.

The SWCC consists of representatives from six community-based catchment groups in the area, State Government agencies and local government.

South West Catchments Council chairman David Reid, Deputy Premier Hendy Cowan and Soil and Land Conservation Council chairman Rex Edmondson at the partnership signing.

The first task for the agreement partners will be to complete a regional strategy to address the land, water, biodiversity and coastal issues in the south-west region, which stretches from Serpentine to Manjimup and east to Dumbleyung.

Water mining is the drill

Drilling rigs have become familiar sights in many WA towns during the last few months during the Rural Towns Program's Community Boreholes Project.

From May to July 350 boreholes are being drilled in 23 rural towns to assess the impact of rising watertables and salinity.

A team of 12 hydrologists from Agriculture Western Australia is supervising the drilling.

The holes are normally drilled in a grid formation with about 10 to 15 sites in each town to study watertable dynamics and aquifer characteristics.

Rural Towns Chairman Rex Edmonson (left), hydrologist Ben Whitfield and Program Manager Mark Pridham discuss drilling results in Tambellup.

The bore holes will allow monitoring of changes in underground water levels over at least 18 months.

Rural Towns Program Manager, Mark Pridham, said the drilling was showing that enough water lies below most towns to warrant future pumping to remove it.

"We plan to use aquifer de-watering to reduce watertable levels, and hope to produce yields of about 100 cubic metres per bore per day," he said.

The next stage after pumping is disposal which could be a problem because in most cases, the pumped water is saline. This means the only environmentally safe disposal is by evaporation ponds. Although a proved disposal method in the eastern states, evaporation basin technology is only in the early stages in WA.

Here, the focus is likely to be more on value adding by way of aquaculture, salt harvesting and de-salinisation to provide potable water for townsites.

Following bore installation, water monitoring and borehole pump testing will be used to produce a groundwater model for each of the 23 towns.

Mr Pridham said the boreholes project would report in November, to give the towns the chance to implement salinity management options tested by the modelling in the following summer.

For more information contact Mark Pridham on 9368 3919.

New Salinity Council Executive

The State Salinity Council has elected a new executive.

The executive — which is established from members of the full council — is designed to conduct the day to day business of the council and will meet every two months.

Executive members are:

Alex Campbell (chair)
Jos Chatfield (general member)
Rex Edmondson (general member)
Garry English (primary production representative)
Barbara Morrell (regional natural resource management representative)
Ken Pech (local government)
Rod Safstrom (general member)
Rachel Siewert (conservation issue representative)
Wally Cox (Department of Conservation and Land Management)
Bryan Jenkins (Department of Environmental Protection)
Roger Payne (Water and Rivers Commission)
Graeme Robertson (Agriculture Western Australia)

The executive had their first meeting on 26 June.

In the meantime, the Salinity Council is moving to consolidate its funding, particularly the additional $3.6 million from the State Government, and to plan its program for the coming financial year. The full council meets two to three times a year.

Salinity guide hits the ground

A handy new tool in the fight against salinity is being distributed to farmers and other land managers across the State's agricultural region.

The booklet "Salinity: A guide for land managers" was produced as part of the State Salinity Strategy.

The guide provides an overview of the options available for land managers to use at the farm and catchment scale to address salinity issues.

It covers options such as changing agricultural practices, freshwater aquaculture, commercial farm forestry, native vegetation management, engineering options and productive use of saline lands.

State Salinity Council chairman Alex Campbell said the Salinity Strategy set the broad directions for salinity management but also highlighted that actions were needed across a wider area and more quickly than anticipated in the 1996 Salinity Action Plan.

"The guide being distributed to farmers and land managers should be used as an initial reference point when considering the range of options available to address salinity," Mr Campbell said.

"The booklet does not cover all aspects of salinity management but it does include details on who to contact for further information on the options covered.

"None of the options listed in the guide should be considered in isolation. Catchment groups and individuals will need to implement a combination of activities to manage salinity in their area."

Mr Campbell said the agricultural region was not affected by salinity uniformly so the tools to address salinity would differ according to the catchment and rainfall zone in which they were being implemented.

About 15,000 copies of the guide were distributed in June through rural press. Copies are also available from regional offices of Agriculture Western Australia, the Water and Rivers Commission and CALM.

Attending the regional release of the Salinity Strategy in Albany in April: Jean Webb, Chairman Wilson Inlet Catchment Committee and Chairman Wilson Inlet Management Authority; Naomi Arrowsmith, Regional Manager South Coast, Water and Rivers Commission; Julia Fry, Acting Program Manager, Sustainable Rural Development, South Coast, Agriculture WA; and Tony Smith, Chairman Springs Focus Catchment Group.

Strategy goes on regional tour

The new Salinity Strategy has been doing the rounds of the regions since its Perth release earlier this year.

Following the April launch of the Salinity Strategy on the banks of the Swan River at Caversham, the Strategy has been the subject of regional briefings around the south-west.

Three releases have been held at functions hosted by the Natural Resource Management regional groups.

Briefings were held in April with the South West Catchments Council, the Northern Agricultural Integrated Management Strategy group and the South Coast Regional Initiative Project Team.

Salinity Council executive officer Don Crawford said the briefings were helping to make the local community aware of the Strategy and the opportunities for them to work with the Council in developing solutions for their own area.

The briefings have been attended by NRM regional group members, State and local government agency representatives and community leaders.

Other briefings were scheduled for July in Wagin in the Blackwood catchment and Pingrup in the Avon catchment.

Changes looming in drainage regulation

Gaining approval for proposed deep drainage works and finding information on the most suitable practices should become much simpler following ministerial endorsement of recommendations of the Deep Drainage Taskforce.

The Taskforce chaired by Dexter Davies MLC released its report in March and made 11 recommendations to help develop a protocol to coordinate deep drainage practices in the south-west agricultural region east of the Darling Scarp.

Major recommendations included:

- providing a whole of government one-stop-shop approach to the drainage process through a memorandum of understanding between agencies;
- developing a code of conduct and industry accreditation;
- providing best practice information on drainage and conservation earthworks through Agriculture Western Australia;
- working closely with industry and professional organisations to develop appropriate standards for drainage design and construction;
- establishing a disputes resolution process to mediate disagreements between various parties.

Primary Industry Minister Monty House said he had established the Taskforce in August 1999 to maximise the benefits in treating salinity and waterlogging while considering the possible negative impacts of drainage water disposal.

He noted that the Taskforce had consulted widely, including eight public meetings and site visits through the wheatbelt plus discussions with many groups and agencies.

"I support the overall approach to managing drainage developed by the Taskforce and have asked that the recommendations be implemented as a matter of urgency through Agriculture Western Australia," Mr House said.

Managing flood risk and surface water

An Agriculture Western Australia study conducted on the heavy rains in eastern wheatbelt areas last January has highlighted the importance of managing flood risk and surface water.

Flooding experienced by some landholders and the peak flows generated in river systems would have been much greater without these natural detention basins. Efforts to drain these lakes or to use them as convenient drain outlets, reduce the effectiveness of the lakes as a control mechanism during such heavy rainfall.

An aerial survey soon after the deluge revealed extensive damage in some areas caused by bursting creek and river banks, and by inadequate surface water management plans on many properties.

Overflow from poorly designed drains and banks damaged roads and other infrastructure.

Lockhart District hydrologists Rosemary Nott and Mahtab Ali reported seeing some excellent examples of whole farm contouring and water management designs that were able to manage run-off from the event successfully.

But drainage systems that failed were clearly not designed to withstand such rainfall and resulted in much greater damage.

The report suggests that some damage could have been avoided had an integrated drainage and water management system been in place in some catchments.

Under the State Salinity Strategy, Agriculture Western Australia will launch an initiative in 2000/01 that will focus greater effort on delivering and implementing integrated surface water management systems in dryland agricultural catchments.

The search begins

The search is on to find native tree species suitable as new commercial tree crops, to increase the revegetation options available to landowners.

The four-year, $1.5 million project is being funded by the State Government, through CALM and Agriculture Western Australia, and the Bushcare and Farm Forestry programs of the Commonwealth Government's Natural Heritage Trust. Another $250,000 will be spent by landowners taking part in the study.

Graeme Olsen, Manager of the Search Project, said the aim was to select prospective species and products and then conduct a preliminary investigation of the feasibility of developing them on a commercial scale.

"We are looking for species with the potential to earn commercial return from extensive planting in medium to low rainfall areas, where they will help prevent watertables from rising and reduce the risk of salinity problems," Mr Olsen said.

"But the Search Project is not just about economics. We will confine the project to native species thus greatly diminishing the risk of introducing species that may become weeds. We are also assessing other nature conservation values — for example, whether a particular species will provide fauna habitat — and how readily it can be integrated with other crops and stock."

The curator of the University of Illinois herbarium, Professor David Seigler, was invited to Perth last month by the Search Project management committee.

Professor Seigler is a phytochemist whose interests include the use of plant chemistry as a taxonomic tool, and the discovery and exploitation of plant compounds in products such as insecticides and pharmaceuticals.

A national consultative panel is also being formed, to review plans and progress.

ECO ACTION

The State Government has recently launched its Eco Action brand to let West Australians know about the action being taken to protect our environment and how to be involved.

Naturally, the Salinity Strategy is one of the key programs falling under the Eco Action banner, featured on this edition of the Salinity Council's newsletter.

The branding strategy recognises the community's need for credible and factual information about the environment, and highlights the shared responsibility we all have for the future state of our environment.

The Eco Action symbol will be used to identify major initiatives in environmental management.

NEW SALINITY MANAGER

Agriculture Western Australia has appointed hydrologist Richard George as its new manager of salinity coordination.

Dr George was previously discipline leader for Agriculture Western Australia's Catchment Hydrology Group, where he helped farmers to understand what was happening with water underground, and developed salinity management systems best suited to WA conditions.

MORE LAND FOR WILDLIFE

The number of landowners applying to join CALM's Land for Wildlife program continues to grow — 647 applications have been received since the program began in February 1997.

The area of remnant native vegetation now being managed privately as Land for Wildlife sites totals nearly 74,000 hectares.

Salute to the humble mallee

Spare a thought for the mallee when next choosing trees for windbreaks, shade or as living pumps, urges Agriculture Western Australia.

Natural Resources Manager Bob Nulsen said that many of the mallee eucalypts that covered most of the State's inland before agricultural development were able to use most of the rain falling on their canopies.

"If you look at many mallees and some larger eucalypt species, you can see the vase structure that channels a large proportion of rain falling on the canopy down the branches to the trunk and into the ground," Dr Nulsen said.

"Research in the 1980s showed that up to 80 litres of water was captured by the canopy of a single tree from 25 mm of rain and channelled deep into the root zone for future use. A large salmon gum channelled 400 litres down the trunk from the same rainfall.

"This water harvesting mechanism helped to ensure that the native perennial vegetation survived through the dry years and was able to maintain the balance between salt and water in the ecosystem."

Rising salinity in many agricultural areas has been caused by the replacement of native perennial vegetation with annual crops and pastures that only use a small proportion of the available water. Over time this has caused watertables to rise, bringing salt close to the surface and creating problems.

Dr Nulsen said that moves were underway to develop mallee as a multi-product farm crop. Unless commercialisation of trees was successful, it would not be practical to revegetate on the scale required to control salinity. In the meantime if landholders were planning trees for windbreaks and other uses, they should not overlook this very functional tree.

Trees to tackle salinity

The Water and Rivers Commission will report findings from years of salinity research in the Collie River Catchment at the Agroforestry Expo and the Collie Field Day in August.

Experimental catchments were established in the catchment 20 years ago to help understand salinity processes and to test revegetation options. The Collie catchment is a water resource recovery catchment and a target has been set to reach potable public water supply from the Wellington Dam by 2015.

The Water and Rivers Commission is working with the community through recovery teams to achieve land and stream salinity control.

WRC Catchment and Salinity Investigations manager Geoff Mauger has had a long association with these sites.

He will be the tour guide on the Collie Field Day on Friday 25 August and a speaker on Saturday morning at the Flax Mill on Saturday 26 August at the Agroforestry Expo 2000.

For further information or to book for the Collie Field Day, contact Alex Waterhouse on (08) 9278 0730.

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

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