

## Community Support Scheme underway

The first project to receive funding from the State Salinity Council's Community Support Scheme was announced by the Deputy Premier, Hendy Cowan, in October.

The Wooroloo Brook Salinity Management Scheme will receive \$81,000 from \$3 million of State Government funding which is ear-marked for community-level salinity projects. The Wooroloo project is a prime example of the priorities for the funding. "Importantly, this money is hitting the ground directly through land owners and community groups," said Mr Cowan.

"It is also worth noting that the projects to gain funding were chosen by a comprehensive process which involved community members from the regional natural resource management groups and the State Salinity Council."

The Wooroloo Brook group applied for funding assistance to allow them to build upon work that has already been done in the area, develop a more comprehensive picture of the salinity problems across the catchment and clearly demonstrate the benefits of an integrated approach to salinity remediation.

The project will start with a hydrogeological survey of the project area to better understand the geology, watertable contours, groundwater flow and surface water movement. This information will then be used to guide future on-ground works.

### Salinity assistance available for farmers

The Warren Recovery Team (Water Resource) is reminding farmers that assistance is still available for work to reduce salinity in the catchments of the Tone and Perup rivers.

The team's executive officer, John Platt of the Water and Rivers Commission Bunbury, said that since the first call for expressions of interest in cost sharing, 54 farmer-led projects had obtained financial and other assistance.

Projects have included:

- Remnant vegetation protection,
- Lucerne demonstrations,
- Riparian zone protection,
- Alleys of trees,
- Revegetation of deep sands and 'break of slopes',
- Perennial pastures,
- Surface water earthworks.

"All these works will assist us with our aim of reducing the 285,000 tonnes of salt that flow into the Warren River each year from the upper catchment and with returning the river to fresh water by the year 2030," John said.



Peter Murray (Chair of the Eastern Hills Catchment Management Project Steering Committee), Mike Grasby (Chair of the Swan Catchment Council), Robert Huston (Chair of the Wooroloo Brook LCDC), Deputy Premier Hendy Cowan, Linda Raynor (Catchment Landcare Officer) and Alex Campbell (Chairman of the State Salinity Council) at the Wooroloo launch.

### Funding issues

The State Government has recently announced the allocation of \$20 million from the sale of Alinta Gas to help implement the State's Salinity Strategy. This will be further increased by a share of \$700m funding released as part of the National Action Plan on Salinity and Water Quality. More information about the plans for this funding will be available soon.

A full list of the programs that have received funding from the State Salinity Council's Community Support Scheme can be found inside this newsletter. See also the report on the launch of the Merredin Townsite Groundwater Pumping and Desalination Pilot Project early in December – the second of the Community Support Scheme's projects to be launched.

Team member, Digby Stretch, who represents the Moberup sub-catchment, said that while the group doesn't have all the answers, they were there to encourage farmers to go ahead with the best options for their land.

"Advice and assistance is available — the Warren Recovery Team has seven members who represent all the sub-catchments of the Perup River and Tone River," he said.

Anyone wanting to contact the team members or the regional salinity coordinator should contact the Water and Rivers Commission's Bunbury office on (08) 9721 0666 for details.

## Projects funded under the State Salinity Council Community Support Scheme

This is a complete list of all projects that received funding from the State Salinity Council's Community Support Scheme. The projects that gained funding were chosen by a comprehensive process which involved community members from the regional natural resource management groups and the State Salinity Council. More information is available through Don Crawford, Executive Officer of the State Salinity Council on tel. (08) 9325 0061.

Project Title	Project Organisation	Region	Length of Project	Funding
Wooroloo Brook Salinity Management Scheme	Wooroloo Brook LCDC and Eastern Hills Catchment Management Group	Metro -Swan	2 years	\$81,000
An integrated approach to the planning, training and management for the revegetation of saline land	Saltland Pastures Association	Avon	1 year	\$200,000
Beacon River Catchment Salinity Management Project	Mt Marshall LCDC	Avon	1 year	\$100,000
Rehabilitating the Nangetty clays and breakaway slopes	Mingenew-Irwin Group	Northern	2 years	\$30,000
Protecting and rehabilitating sandplain wetlands and seepages	Mingenew-Irwin Group	Northern	2 years	\$40,000
Reconstructing stable saline ecosystems that provide both nature conservation and production values	Northern Agriculture Integrated Management Strategy Group (NAIMS)	Northern	2 years	\$120,000
Jibberding Flats Catchment Surface Water Management System	The Yarra Yarra Catchment Management Group (Inc)	Northern	3 years	\$150,000
Promotion of Sustainable Change	Shire of Victoria Plains Landcare Management Committee	Northern	2 years	\$197,700
Blackwood Spatial Information Delivery System to Support Salinity Risk Management and On-Farming Planning	Blackwood Basin Group (on behalf of Upper Blackwood LCDCs)	South West	3 years	\$120,000
Integrated Salinity, Water and Nutrient Management on the Swan Coastal Plain	Leschenault Catchment Council	South West	3 years	\$150,000
Dumbleyung Strategic Water Management	Dumbleyung Water Management Steering Group	South West	2 years	\$200,000
Demonstration of an Integrated Salinity Treatment in the James Crossing sub-catchment in the Collie Water Resource recovery Catchment	Collie Recovery Team	South West	1 year	\$300,000
Hotham Catchment Better Water Management Project	Cuballing LCDC	South West	3 years	\$90,000
Two Rivers Lucerne Project	Jerramungup Landcare Services Inc. & Gnowangerup LCDC	South Coast	1 year	\$200,000
Engineering Tools for Managing Salinity 2 - Siphon assisted Relief Wells	Gordon Sub-Catchment & Kent Recovery Team	South Coast	1 year	\$150,000
Opening the Data Tap	South Coast Regional Information Centre	South Coast	1 year	\$120,000
Teaching About Salinity	Albany Hinterland	Statewide	1 year	\$25,000
Merredin Groundwater Pumping and Desalination	Agriculture Western Australia / Water Corp / Shire of Merredin	Avon	1 year	\$320,524
Spatial information delivery systems for subcatchment groups in the Avon River Basin	Avon Working Group	Avon	1 year	\$120,000
Integrated water management for the Bodallin Catchment	Bodallin Catchment Group	Avon	1 year	\$124,000
Regional Management and Administrative Support	All Regions	All Regions	2 years	\$150,000
Audit project to be developed	SSC	All Regions		\$12,000
				<b>\$3,000,224</b>

# Dual benefits from Merredin pilot scheme

The second project launch under the State Salinity Council's Community Support Scheme took place in Merredin at the beginning of December.

The Merredin Townsite Groundwater Pumping and Desalination Pilot Project, which received \$320,000 from the State Salinity Council's funding program, is a joint initiative of Agriculture Western Australia (AGWEST), the Water Corporation and the Merredin Shire.

Deputy Premier Hendy Cowan presented the cheque to Merredin Shire President Lindsay Caughey in a launch topped off by a spectacular demonstration of the high groundwater level under the town.

Primary Industry Minister Monty House, who took part in the launch, was excited about the potential benefits of the scheme. "In Merredin, salinity is affecting the foundations of businesses in the centre of town and this project will turn a negative problem into a positive resource," he said.

The project will run for one year and has the potential to provide dual benefits to Merredin. Groundwater, now less than three metres below the town and with a salt content half that of sea water, will be pumped out of the ground to help control the salinity problem. Part of the water will then be desalinated and has the potential to be an alternate source of drinking water to supplement water pumped from Perth. The rest of the water will be discharged into closely monitored evaporation basins.

Dr Kim Hames, Minister for Water Resources, said that a major desalination study showed that desalination had become more financially viable in some areas.

"This pilot project not only has exciting potential for Merredin, but other country towns in their fight against salinity and providing them with another source of potable water," he said.

If the project proves viable, it may be extended to a number of other rural towns facing similar salinity issues.



Deputy Premier Hendy Cowan, Minister for Water Resources Dr Kim Hames, Merredin Shire President Lindsay Caughey and Primary Industry Minister Monty House testing the equipment at the Merredin launch.

## Western Australian scientist wins top salinity award



Consecutive winners of the WE Wood Award for excellence in salinity research, Dr Tom Hatton from CSIRO (1999) and Dr Richard George (right) from Agriculture Western Australia (2000) at a recent national salinity conference in Victoria.

Agriculture Western Australia's **Richard George** has received the nation's top award for excellence in salinity research and development.

He is the second Western Australian to win the WE Wood Award, following Tom Hatton from CSIRO Land and Water, who was the inaugural winner last year. The award was presented at the National Dryland Salinity Conference in Bendigo in November.

The award recalls Walter Ernest Wood, a railway engineer who observed the link between clearing and development of salinity in railway dams. Wood's findings were published in the *Journal of the Royal Society of Western Australia* in March 1924.

Richard's research has ranged widely and included understanding sandplain seep treatments, airborne geophysics, revegetation, saving the last freshwater lake in WA (Toolibin) and prediction of salinity changes.

"It is important to remember that although salinity threatens a great deal of the WA landscape, there is land that will never be affected. It is essential that we make conservation of this land a very high priority," he said.

# Training for the perfect drain

Drainage designs to overcome salinity and improve surface water disposal in WA should improve as a result of two new nationally-recognised courses now available to contractors and those working in the landcare field.

The courses reflect AGWEST's focus on including engineering solutions as well as revegetation and changed farming systems in an integrated approach to the problems of salinity.

Project manager Neil Coles said a major selling point of the course was the recognition of the existing skills of participants. This should make the courses attractive to drainage contractors and others working in the field who might lack conventional educational qualifications.

The Diploma in Conservation Earthworks has been developed by industry nationally with delivery through Challenger TAFE (formerly South Metropolitan) and is aimed at practitioners in land conservation and earthworks construction.

A second course developed with Challenger TAFE and Murdoch University provides an entry into training at Certificate IV level that will lead to a Diploma in Environmental Management (Water Harvesting), and finish with a Bachelor of Technology (Environmental Technology) from Murdoch University.

Several modules in the earthworks course have already been delivered and interest has been high. Bunbury, Moora and Geraldton intend to run courses during 2001 with further deliveries planned for Albany and other centres if numbers are sufficient.

For further information contact Neil Coles on (08) 9368 3617 or Martyn Keen on (08) 9956 8529.



Farmer Trevor Massey (left) and John Adams from Challenger TAFE (right) receive instruction in levelling techniques from course presenter Nick Cox (AGWEST Bunbury) during "An introduction to the Planning and Pegging of Conservation Earthworks" at North Dandalup.

## Drainage brochure available

More information about drainage as part of catchment water management is available in a new Natural Resource Management brochure. The brochure has been published jointly by the State Salinity Council, the Water and Rivers Commission and AGWEST. The brochure contains guidelines for assessing the problems associated with water management and will help farmers determine whether drainage is the best solution for their situation. Contact details for local information and advice are also included. For a copy of the brochure, contact Allan Johns from AGWEST in Narrogin (ph (08) 9881 0222) or Luke Pen from WRC (ph (08) 9278 0300).

## New natural diversity recovery catchment

A 140,000-hectare area in the northern agricultural zone between Dalwallinu and Coorow has become the fifth recovery catchment for natural diversity under the State Salinity Strategy.

The Buntine-Marchagee catchment has been included following consultation with local landowners and catchment groups and has been endorsed by the National Parks and Nature Conservation Authority (now replaced by the Conservation Commission of WA) and the State Salinity Council.

Natural diversity recovery catchments are identified for priority action under the strategy because they have high natural diversity that is at risk from rising watertables and salinity.

The Buntine-Marchagee catchment has high biodiversity values, including 39 species of native plants listed on CALM's priority flora list, and a range of mammals, reptiles and birds.

The sandplain in the southern part of the catchment is criss-crossed by saline drainage lines often referred to as 'braided channels'. Many of the saline streams, pans and samphire areas are naturally saline but other parts of the catchment are at risk of increased salinity because of rising watertables.

This is the only nominated recovery catchment with braided channels, which are common in the wheatbelt as a whole. Consequently, the recovery actions that will be prepared for the catchment will provide a valuable insight into how to tackle salinity in similar areas elsewhere.

CALM will coordinate the preparation of a recovery plan for the catchment, in close consultation with the local land conservation district committees and catchment groups.

The overall focus of the recovery strategy will be 'on-the-ground' works on private farmland.

# Sponsorship to attend PURSL conference

One Western Australian farmer can win a free trip to Tasmania to attend the PURSL conference in March.

The seventh national PURSL (Productive Use and Rehabilitation of Saline Lands) conference will be based in Launceston from 20 to 23 March 2001. It will feature international and national speakers, papers and field trips showing practical ways to apply productive use and rehabilitation at farm and catchment level.

In order to encourage farmer participation, the National Dryland Salinity Program has provided sponsorship for a farmer from each State to attend. Fifteen hundred dollars is

being provided for the WA winner who will be judged on a one-page case on how the community could benefit from his or her attendance.

Contact for the WA applications sponsorship is Michael Lloyd on (08) 9871 2041, fax (08) 9871 2062 or email [lloyd.vs@farmwide.com.au](mailto:lloyd.vs@farmwide.com.au).

Full details of the conference can be obtained by phoning (03) 6224 3773 or accessing the website at [www.cdesign.com.au/pursl](http://www.cdesign.com.au/pursl).



## Salinity at the show

Deputy Premier Hendy Cowan made an impression on the locals when he opened the salinity-themed exhibition in the Conservation and Landcare Pavilion at the 2000 Royal Agricultural Show. The pavilion is a cooperative project involving government agencies, corporations and community groups, and is now located in new, high-profile premises in the centre of the Claremont showgrounds. The exhibition was designed to increase awareness of the problems caused by salinity and to highlight the efforts of individuals, corporations and agencies in the fight against salinity.

## Groundwater rises shown by WA Audit

Groundwater is rising across most of the agricultural land in the south west of Western Australia, the WA component of the National Land and Water Resources Audit has revealed.

No land systems have significantly falling trends, indicating that efforts to reverse the trend to counter increasing salinity have yet to take effect.

The work on the "Extent and Impacts of Dryland Salinity" was undertaken by AGWEST hydrologists Cecilia McConnell and Rod Short.

Their work over 12 months indicates that about 16 per cent of the south west currently faces potential salinity due to shallow watertables. This area is expected to reach 20 per cent by 2020 and 33 per cent by 2050. Most is agricultural land.

The impacts of salinity do not stop at the farmgate. Salinity is threatening many endemic plant species with extinction, and the survival of remnant bushland is also at risk. Rising groundwater is currently affecting 20 per cent of road and rail networks and could reach 40 per cent or 30,000 km by 2050. The costs of additional repairs and maintenance for roads and rail is estimated at \$516 million per year. Other

infrastructure, including houses, commercial buildings and public grounds, is also being affected in about 30 rural towns.

"All analysis was based on groundwater depth and trend, to provide risks of shallow watertables," Cecilia McConnell commented. "Not all land with shallow watertables will become saline, but as dryland salinity is primarily caused by shallow watertables, the risk is closely related."

"Most of the valley floor systems in the eastern wheatbelt were mapped as having watertables at less than 2 m, reflecting the naturally occurring salt lake chains and some expansion of salinity," Ms McConnell said. "These areas plus eastern sections of the northern wheatbelt show the greatest risk."

Rates of watertable rise were found to be very variable with some landscape systems rising at 5 cm per year, but others more than 50 cm.

Most groundwater in WA agricultural areas is moderate to saline with electrical conductivity of 500 to 2,500 milliSiemens per metre. However salinity increases in the broad wheatbelt valleys with conductivities up to 5,000mS/m (close to that of the ocean). North of Esperance it can be even higher.

# Salinity management in the Kent and Denmark recovery catchments

Landholders in the Kent and Denmark Water Resource Recovery Catchments have embraced catchment and property planning to guide salinity management works.

Over the past year, more than 60 per cent of the 74 landholders received colour orthophoto mosaics of their farms from the Water and Rivers Commission (WRC).

Other information explaining catchment hydrology, geology and extent of salinity was also provided by the WRC to landholders to guide decision making.

WRC staff from the South Coast Regional Office in Albany helped 30 Kent landholders to plan salinity management works.

About 16 of these landholders completed their property plans and have committed to implementing the planned works over the next few years.

In keeping with the partnership approach taken by the Kent Denmark Recovery Team, the WRC has agreed to share the

cost of implementing the planned works. Planning is ongoing with the remaining landholders.

For the next year alone, landholders have committed to implementing 20 km of surface water management drains, 37 ha of native revegetation, 79 ha of perennials, 52 ha of saltland revegetation and 11 km of waterway fencing.

The WRC has agreed to contribute about \$75,000 toward the cost of this work.

Other works contributed to by the WRC include:

- 24 km of the Kent River foreshore fenced and 24 ha revegetated
- 110 ha of lucerne planted since 1999 by a lucerne growers group
- 1345 ha of high significance remnant vegetation to be fenced with 60 km of fencing
- 130,000 seedlings distributed by WRC and 130 ha planted over last two seasons.

## Results in print

The first detailed article on the four-year biological survey of the south west agricultural region has been published.

The survey was initiated by CALM under the 1996 Salinity Action Plan and its preliminary results contributed to the formulation of the new Salinity Strategy released earlier this year.

Its aim is to document the biodiversity of the region, to quantify the extent to which it is threatened by increasing salinity, and to help identify priority areas for investment under the Salinity Strategy. As an example, survey results will

continue to be used to select additional priority areas under the strategy's natural diversity recovery program.

In "*Wheatbelt wonders under threat*", CALM research scientist Greg Keighery reports that it is clear that the biodiversity of the wheatbelt is very high. However, of about 4,000 flowering plant species found in the region, more than 850 are found only in fresh or naturally saline lowlands, which are directly threatened by rising groundwater and salinity.

The article has been published in CALM's *Landscape* magazine, and is also available as a reprint. The survey is due to be completed at the end of next year and the full findings will then be published in the scientific literature.

## New communications officer

The State Salinity Council has a new Communications Officer. Liz Yuncken will be working with Executive Officer Don Crawford and the Public Affairs Managers from the four agencies (Agwest, WRC, DEP and CALM) on media issues, public relations and other communications activities.

She can be contacted at [eyuncken@agric.wa.gov.au](mailto:eyuncken@agric.wa.gov.au) or on telephone (08) 9325 0031.

## What's On

**6 February** - Symposium on "Salinity: The Science behind the Action", Robertson Lecture Theatre, Murdoch University. Registration of \$25 includes tea/coffee, lunch and parking

**18-21 February** - Salinity, Land Management and New Technologies conference, Bendigo. For information visit [www.aseg.org.au/vic/bendigo-conference](http://www.aseg.org.au/vic/bendigo-conference)

**20-23 March** - Productive Use and Rehabilitation of Saline Land (PURSL) 7th National Conference, Launceston. For information visit [www.cdesign.com.au/pursl](http://www.cdesign.com.au/pursl) and see article in this newsletter

**31 July - 1 August** - Wheatbelt Valley Floors Conference, Merredin

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

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