



WaterWheel

National Program for Irrigation Research and Development

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• Welcome

The demand for copies of WaterWheel and the inserts outlining NPIRD research projects and research results has increased dramatically.

Circulation has risen from 240 copies for the first edition in 1995 to more than 6,000 for our last edition. This is a very positive situation, and one on which we would like to build.

The original idea for WaterWheel came from a survey of clients over three years ago. Times have changed and whilst you do not change something that is obviously in demand we are keen to keep up with the ways in which you like to receive information and to be sure that the information presented is useful to you.

For this reason we are carrying out a survey early in 1998. We will be asking some of our regular readers for their opinion of WaterWheel.

We will also circulate the survey to a randomly-selected group on the IAA mailing list so that we can pick up differences between how our 'regulars' like their information and the random sample.

So, if you receive a survey form, please spare a few minutes of your time to fill it in, and hopefully the benefits will flow back to you.

Noel Dawson

NPIRD Coordinator

50 O'Connell Parade

Wellington Point Qld 4160

Phone: (07) 3822 3053; **Fax:** (07) 3822 5292

Mobile: 041 974 2641

Email: noeldnrm@onaustralia.com.au



**Land & Water
Resources
Research &
Development
Corporation**

This publication is managed by the Land and Water Resources Research and Development Corporation (LWRRDC), GPO Box 2182, Canberra ACT 2601.

LWRRDC's mission is to provide national leadership in utilising R&D to improve the long-term productive capacity, sustainable use, management and conservation of Australia's land, water and vegetation resources. The Corporation will establish directed, integrated and focused programs where there is clear justification for additional public funding to expand or enhance the contribution of R&D to sustainable management of natural resources.

LWRRDC's Home Page is: www.lwrrdc.gov.au

• *From the Coordinator's desk*

Funds for our three-year program (1996 – 1999) are now very close to being fully committed.

To date, NPIRD has invested \$5 million into irrigation R&D projects. The total value of these projects including investments from our partners and collaborators is just over \$12 million.

We are now embarking on the development of the next program to begin in 1999-2000, and have just held a workshop to develop some forward-looking scenarios as a basis for identifying future priorities. Some ideas from this foresighting workshop are reported in the supplement. Also, other workshops on more specific topics will be held throughout Australia to assist our planning.

Some of our early projects are really producing quality R&D results. These are also reported in the supplement with this issue. If you are interested in these projects and want more information, please don't hesitate to contact the researcher.

Also included with this newsletter is a list of all our current or recently completed projects together with contact details.

Currently most of the funding for NPIRD projects comes from Victorian irrigation authorities, the Queensland Government, the NSW Government, irrigators and LWRDC. We are trying to involve the other states, particularly WA and SA, as they also have significant irrigation areas and benefit from the R&D.

A lot is happening in water management at the moment. I like to think that NPIRD is making a significant contribution to improving the sustainability of our irrigation systems, improving the economic performance of the industry and farms, and at the same time reducing impacts on the environment.

All the best for the New Year.

Noel Dawson, Coordinator

• FORMATION OF NEW IRRIGATION EDUCATION BODY

The Irrigation Association of Australia convened two one-day forums in November to improve the status of irrigation education nationally.

One of the main outcomes of the forums was the strong mandate given to the IAA by the irrigation industry to set up a coordinating committee for irrigation education.

The detail of the structure of the committee had not been finalised when this newsletter went to print, though it is planned that selection of committee members will be done in a similar way to Research and Development Corporation boards.

Application forms and an information package are available now for organisations or individuals who wish to express their interest (see below). The closing date will be early in February 1998.

• IRRIGATION COURSES LIST

LWRDC, through NPIRD, has provided funding to the IAA to finalise a list of irrigation education courses available in Australia in 1998.

The recent two forums on irrigation education and training identified the course database as a priority action.

Please let Alison know if you know of a course which could be added to the database.

The final document will be available in February 1998 in a printed form, and also by the internet or Email.

Further information:

Alison Carmichael

Phone: (02) 6628 7079

Fax: (02) 6628 7209

Email: alisonc@om.com.au

or

Anne Currey

Phone: (02) 6687 8173

Fax: (02) 6687 8798

• *Keeping in touch – Management Committee Notes: Key issues from the minutes*

• 29th Meeting – 13/14 November 1997

Management Committee

Ms Christine Forster (<i>Chairperson, LWRRDC</i>)	
Ph (03) 5352 1530	Fax (03) 5352 3363
Dr Roger Shaw	Qld
Ph (07) 3896 9472	Fax (07) 3896 9623
Mr Robert Hutchinson	Qld
Ph (07) 9974 161	Fax (07) 9974 191
Mr Steve Mills	Vic
Ph (03) 5862 1777	Fax (03) 5862 2732
Mr Richard Wells	Vic
Ph (03) 5025 2288	Fax (03) 5025 2275
Mr Warwick Watkins	NSW
Ph (02) 9563 8601	Fax (02) 9563 8437
Mr Geoff Wright (<i>LWRRDC</i>)	
Ph (03) 5882 6328	Fax (03) 5882 6373
Mr David Mittelheuser	NSW
Ph (02) 9895 7817	Fax (02) 9895 7198
Dr Nick Schofield (<i>Program Manager, LWRRDC</i>)	
Ph (02) 6257 3379	Fax (02) 6257 4320
Mr Noel Dawson (<i>Coordinator</i>)	
Ph (07) 3822 3053	Fax (07) 3822 5292

• **Program Evaluation**

It is proposed that we should undertake a full review of the program similar to that undertaken for the National Dryland Salinity R, D&E Program. The committee agreed that a consultant should be commissioned to carry out the review of the benefits of the program and use this to set the scene for the new program which begins in 1999. The review would complement the work being done in the foresighting and priority-setting exercises. The committee approved funds for the review. It was agreed that the consultant should be selected by tender after advertising.

• **Program Budget**

The guaranteed program funds are now fully committed to projects. Uncertainty still exists about the matching of irrigator funds from NSW, and the management committee will actively be seeking to resolve this.

Some commitments have not been made at this stage and if the worst case scenario eventuated then funding for some projects may need to be reassessed.

• **Status Report for Projects**

The Committee noted that all projects are either on schedule or have sought extensions based on reasonable circumstances.

Reviews, Milestones and Final Reports

There was limited time to discuss details of projects which were performing well. The Committee concentrated discussions on projects on which decisions needed to be made.

BSE 3. Unseasonal conditions have caused delays. Additional funds of up to \$20,000 were approved to complete the project, provided that the third parties match LWRRDC funds.

QNR 2. The milestone report has been received, and this will be circulated out of session. This project is being reviewed by the steering committee and, subject to their finding in December, work may cease on the development of the software which would allow asset managers to identify those channels most in need of attention. If this occurs, some funds may be returned and be available for reallocation.

SAS 1 – Best practice guidelines for refurbishment of horticultural infrastructure

A presentation was made by Chris Stanton, and discussion concentrated on the implementation plan so that this project can proceed to the application phase. It was decided that legal procedures should be investigated before proceeding further. An action plan needs to be established with the client agencies to promote and market the guidelines, and a summary of the project will be prepared for insertion in WaterWheel and forwarded to likely clients of the guidelines.

The Committee appreciated the willingness of Chris Stanton to provide advice on the use of the manual.

SRW1 – Benchmarking

John Wood outlined the actions that will be needed to achieve a more holistic approach in this project. The Committee noted the weakness in both the environmental and on-farm benchmarking. It was agreed that Roger Shaw chair a revamped steering committee (John Wood, Phil Cole, Steve Mills [or his ANCID nominee], the principal researchers of GMW 3 and MIL1 and Noel Dawson) to assess how best to integrate results of all the current and proposed projects to achieve a more holistic result and ensure it is applied more widely.

Particular attention should be given to identify who should be collecting data; what actions are needed to implement the process; how to transfer the process to others; and identify who should 'Champion' benchmarking.

Committee notes contd.

Noel Dawson will approach participatory agencies in SRW 1 to ensure that there are no concerns regarding the publishing of the results and the final report. This may require letters from the CEOs of the agencies.

CWN9. The Committee noted that the MDBC had written to Coleambally Irrigation Corporation, Murray Irrigation and Murrumbidgee Irrigation regarding their support for work which will be an extension to our work. At present MDBC does not have funds available to commence this project but is keen to see it start. MDBC is seeking the support of the irrigation companies to fund this project in the interim, and MDBC plans to provide funds in later years.

The Committee agreed that NPIRD would support this work to the extent of \$10,000 (these funds being available as unspent funds in CWN 9), subject to funding from the irrigation authorities and commissioning of the MDBC project.

MDBC Projects. The committee noted progress in the commissioning of MDBC projects.

- **Progress with commissioned projects.**

AWC 1 Development of improved flow measurement in irrigation water supply. The Committee reviewed the long form application prepared for this project. Whilst the project was generally well received Noel Dawson is to approach the proponents to ensure that adequate funding inputs are made by the agencies most likely to benefit from the project and the Benefit to Cost Analysis is to be completed. Noel Dawson will circulate the final proposal to the committee out of session for approval.

The committee noted that the workshop on BMP for Irrigation Development had not been held but that there is considerable interest in this Workshop from Queensland and WA.

Policy: ABARE. The proposal will be circulated as soon as it is received. Funding decisions will be postponed until the next committee meeting.

- **Program Planning**

The committee noted the excellent progress being made in Northern Australia to establish priorities. A budget of \$10,000 will be set aside from workshop funds to run a workshop in 1998 to establish stakeholders views, based on the

work done to date. Final agreement on funding will be sought following the development of a proposal.

- **Technology Adoption and Education.** The project schedule for *Development of participatory action management methodology for research and development* was formally approved.

- **Fellowships.** Support from the committee was given for the Travelling Fellowship proposal by Nick Austin.

Four proposals for student fellowships were evaluated, and it is recommended that the proposal by Wendy Timms (UNSW) on *Water quality sustainability in groundwater abstraction for irrigation* be funded.

- **Communication.** The next issue of *WaterWheel* will be circulated on a trial basis to irrigators in the MIL; all irrigators in one district of GMW; and one irrigation area in Queensland to determine the level of interest.

Survey. The communication survey will be carried out in February. Copies will be sent to a stratified sample of stakeholders and clients with regional distribution based on the importance of irrigation. The survey will be designed to establish differences in response between the 'interested' group and the randomly-selected group.

- **WWW.** Suggestions for a integrated Australian WWW site on irrigation will be followed up.

CSIRO. The proposals for the new CSIRO focus on irrigation was discussed. Concern was raised about the possible loss of the chair for irrigation at CSU.

SA and WA involvement in NPIRD. Phil Cole and Tim Rigden both gave presentations on the likely involvement of their states. Whilst there are still funding issues, both states seem keen to be more involved with NPIRD. Both SA and WA will be involved in future phone hook-up meetings, and will be given the minutes and other relevant data. The committee supported Richard Wells proposal for Noel Dawson to develop a list of NPIRD materials and visit with authorities in SA during January.

Next meeting

8.30am (EST), Thursday 12 February 1998.

Irrigation Australia 1998 Water is Gold

19 – 21 May 1998

The theme of the Irrigation Australia 1998 Conference and Exhibition is 'Water is Gold'.

This theme highlights the value of this scarce resource to agriculture.

The conference will address:

- irrigation research, development and operational activities;
- water resource policies and legislation,
- sustainable water use;
- environmental impacts of irrigation;
- technical aspects of all forms of education in the irrigation industry, and
- agronomic aspects of irrigating crops such as cotton, sugar cane and grains, as well as golf courses and urban landscapes.

Please consider travelling to Brisbane to take part in this important event in the irrigation calendar.

Further information:

Australian Convention and Travel Services

GPO Box 2200

Canberra ACT Australia 2601

Phone: (02) 6257 3299;

Fax: (02) 6257 3256

• *Catchment Management School*

*Regional Water Planning – Making
Catchment Management Work*

Run by the CRC for Freshwater Ecology
and AWWA

Dates: 2 – 4 February 1998

Venue: University of Canberra

Contact: AWWA

Phone: (02) 9413 1288

Fax: (02) 9413 1047

• *CSIRO RESEARCH FOR THE AUSTRALIAN WINE INDUSTRY*

CSIRO is introducing new management practices specially suited to Australian vineyard conditions, and is also introducing and developing new varieties, including rootstocks with special properties of nematode and phylloxera tolerance.

Areas of interest are:

- **vineyard management** (mechanical harvesting; trellis design; minimal pruning and hedging; soil processes and plant water requirements; nutritional needs of the vine);
- **informed decision-making** (computer-based decision support; early and accurate crop yield estimation);
- **Breeding better varieties** from a major collection of more than 700 varieties and species;
- **Variety assurance** using a new DNA profiling technique
- **Gene technology for the future** – building in disease resistance.

Funding for this research is a co-investment of CSIRO, the Grape and Wine Research and Development Corporation and LWRRDC.

Further information:

CSIRO Plant Industry

GPO Box 1600 Canberra 2601

Phone: (02) 6246 5121;

Fax: (02) 6246 5000

Email: info@pi.csiro.au

Internet: <http://www.pi.csiro.au>

• *Popular publication for free!*

**Listing of LWRRDC funded R&D
Current projects and final reports**

November 1997

This 112-page publication lists current projects and all projects completed under the Corporation's management. It can be printed from the LWRRDC Home Page at www.lwrrdc.gov.au on the Internet, or purchased from the DPIE Shopfront for \$5 by calling 1 800 020 157.

• **FOR YOUR DIARY**

1. Xth World Water Congress

Dates: 11-17 March 2000

Venue: Melbourne Convention Centre

Contact: Lisa McNaught

Congress Secretariat

Phone: (03) 9682 0244;

Fax: (03) 9682 0288

Email: worldwater@icms.com.au

Issues such as 'Sharing the Waters of the Earth' and 'Sustainable Water Management in a New Millennium'.

2. Water is Gold

Irrigation Australia 1998

Dates: 19-21 May 1998

Venue: Brisbane Convention Centre

Contact: Conference Secretariat

Phone: (02) 6257 3299;

Fax: (02) 6257 3256

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Land & Water Resources

Research & Development Corporation

Editing and design

by

Sally Berridge

(02) 6241 7001

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Noel Dawson

NPIRD Coordinator

50 O'Connell Parade

Wellington Point

Qld 4160

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Mobile: 041 974 2641

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- WATERWHEEL – National Irrigation R&D Program
- INTERSECT – LWRRDC general newsletter
- FOCUS – Dryland salinity
- RIVERS FOR THE FUTURE
- PESTICIDES AND THE RIVERINE ENVIRONMENT
- PROPHILE – Soil Acidification