



CRC FOR
FRESHWATER
ECOLOGY



LA TROBE
UNIVERSITY



Wise Water Ways

A Workshop in
Stream Management Principles and Practices
24 - 28 October 2004

Venue: La Trobe University, Beechworth



Presented by

The Wangaratta Centre for Adult Education Inc.,
La Trobe University, Earth Tech,
Department of Sustainability and Environment, Department of Primary Industries,
North East Catchment Management Authority,
Murray-Darling Basin Commission, North East Water
and the Cooperative Research Centre for Freshwater Ecology.

Testimonial

We live in a time when our relationship with the environment is undergoing significant change, from a culture of development to a culture of sustainability. As with any change there is fear and uncertainty. The issue of water is at the forefront of these changes and the fear and uncertainty around the water reform process has fuelled a vigorous debate about the condition of our rivers and wetlands and about how to achieve a sustainable balance between the environment and consumptive use. This debate has attempted to call into question the science behind the process and the claim that our rivers are in a degraded state. The debate confronts the scientific community with a variety of challenges including reducing levels of uncertainty, improving our capacity to predict the outcomes from management interventions and providing advice appropriate to the situation. Scientists also need to abstract and communicate science to diverse and often skeptical audiences. Is freshwater science in Australia capable of meeting these challenges? Do we have the necessary infrastructure, skills or relationships with society. While it s tempting to bleat about scarcity of funds and the lack of long term funding we need to examine what we can change so that society will gain a better appreciation of the role of science in natural resource management and therefore invest at an appropriate level.



Ben Gawne
General Manager Natural Resources
Murray Darling Basin Commission

Vision

To provide a forum for a comprehensive overview of Stream Rehabilitation and Management Principles and Practices.

Aims

An integrated approach to Stream Management: Hydrology, Water Quality, Ecology, Riparian Vegetation, Geomorphology and Rehabilitation Techniques.

To provide extensive "hands on" experience through group assignments.

Background

In the six years that the Workshop has been running, over 400 participants have completed the program. The Workshop constitutes a minor "Stream Management Course" and on completion participants will receive a credit towards the TAFE "Diploma of Natural Resource Management".

Who Should Attend?

The course is aimed at people working in, or who are interested in stream management, particularly those involved in practical natural resource works programs.

The Region

Beechworth is situated in North East Victoria. It is approximately 3½ hours drive from Melbourne. The nearest airport is Albury Airport (30 minutes drive). Transfers from Albury Airport can be arranged. Beechworth is an ideal location for the Wise Water Ways Workshop. Diverse vegetation, macro invertebrates and geomorphic issues in the area provide a number of opportunities for managers to evaluate stream systems.



ACCOMMODATION

Accommodation has been reserved for participants at the La Trobe University Campus at a special rate of \$80.00 per person per night including a cooked breakfast. Please complete your accommodation requirements on the registration form.

Program of Activities

Sunday 24/10	Session	Presenter
6.30pm	Arrival	
7.30pm	Welcome and Dinner Address	Terry Hillman Adjunct Professor La Trobe University

Day One

Monday 25/10	Session	Presenter
8.30 - 9.30am	<p style="text-align: center;">Stream Rehabilitation Concepts</p> <ul style="list-style-type: none"> • Steps for stream rehabilitation • Assessment • Investigations • Concepts • Design • Community consultation • Prioritisation 	<p style="text-align: center;">Dr Ian Rutherford <i>Melbourne University</i> <i>Head of the school of</i> <i>Anthropology, Geography and</i> <i>Environmental Studies</i> CRC for Catchment Hydrology</p>
9.30 - 12.30pm	<p style="text-align: center;">Stream Assessment Techniques</p> <ul style="list-style-type: none"> • Introduction and overview • Assessment of hydrology, vegetation and physical condition • Role of macro-invertebrates • Assessment of water quality • Phytoplankton and blue-green algae 	<p style="text-align: center;">Paul Wilson Waterways Unit DSE Dr Roger Croome Dr Phil Suter <i>La Trobe University</i> <i>Albury-Wodonga Campus</i> CRC for Freshwater Ecology</p>
12.30 - 1.30pm	<i>LUNCH</i>	
1.30 - 5.30pm	<p style="text-align: center;">Demonstration of Field Data Collection</p> <ul style="list-style-type: none"> • Field surveys (level and staff) • GPS data collectors • Macro-invertebrate sampling • Vegetation assessment • Physical condition assessment • Geomorphology • Water quality 	<p style="text-align: center;">Chris Dwyer Bob Derrick Earth Tech Dr Phil Suter Paul Wilson Simon Best Ultimate Positioning Group (Vic)</p>
6.30 for 7.00pm	Dinner and keynote address. <i>What is a healthy river?</i>	Dr Ben Gawne Murray Darling Basin Commission

Day Two

Tuesday 26/10	Session	Presenter
8.30 - 9.10am	<p align="center">Catchment Management - Ovens Valley</p> <ul style="list-style-type: none"> • Water quality and catchment condition • Catchment processes - how they affect stream health 	<p align="center">Rick Felton DPI - Wangaratta</p>
9.10 - 9.50am	<p align="center">Environmental Flows/Wetlands</p> <ul style="list-style-type: none"> • Water resource allocation • Wetland management • Importance of environmental flows to wetland health 	<p align="center">Geoff Vietz <i>Melbourne University School of Antropology, Geography and Enviromental Studies</i></p>
9.50 - 10.20am	<p align="center">Catchment Hydrology</p> <ul style="list-style-type: none"> • Rainfall and runoff • Rate of run-off • Stream flow management & quality • Estimation of flows • Flood frequencies • Urban run-off 	<p align="center">Chris Dwyer Earth Tech</p>
10.20 - 10.50am	<i>MORNING TEA</i>	
10.50 - 12.20pm	<p align="center">Open Channel Hydraulics</p> <ul style="list-style-type: none"> • Laminar flow • Turbulent flow • Sub critical flow • Supercritical flow • Critical depth <p align="center">Stream Geomorphology</p> <ul style="list-style-type: none"> • Channel width, depth, planform, grade and bedform • Braided streams vs meandering streams • Factors influencing stream shape and form 	<p align="center">Ross Hardie Earth Tech</p>
12.20 - 1.00pm	<i>LUNCH</i>	
1.00 - 5.30pm	<p align="center">Group Assignment</p> <p>Field based stream assessments at group sites</p> <ul style="list-style-type: none"> • Undertake assessment and management planning • Longitudinal and cross-sectional surveys • Macro-invertebrate sampling • Vegetation analysis • Physical condition assessment 	<p align="center">Split into field groups of 7-10 people</p>
6.30pm	Community Participation in Natural Resource Management	<p align="center">John Riddiford/Judy Griffiths NECMA</p>

Day Three

Wednesday 27/10	Session	Presenter
8.30 - 9.15am	<p style="text-align: center;">Stream Ecology</p> <ul style="list-style-type: none"> • Why is ecology important? • Streams as ecological systems • Indicators of stream health 	<p style="text-align: center;">Dr Gerry Quinn <i>Monash University</i> CRC for Freshwater Ecology</p>
9.15 - 10.00am	<p style="text-align: center;">Fish Habitat</p> <ul style="list-style-type: none"> • Fish ecology - flows, habitat, water quality, barriers, large woody delons • Fish migration triggers and patterns 	<p style="text-align: center;">Dr Paul Humphries <i>Murray Darling Freshwater Research Centre</i> CRC for Freshwater Ecology</p>
10.00 - 10.30am	Morning Tea	
10.30 - 11.30am	<p style="text-align: center;">Riparian Vegetation</p> <ul style="list-style-type: none"> • The Components and importance of riparian vegetation • Management andrevegetation techniques 	<p style="text-align: center;">Judy Frankenberg Ecology-Consultant</p>
11.30 - 12.15pm	<p style="text-align: center;">Willows</p> <ul style="list-style-type: none"> • Identification and propagation • Ecology, dispersal and management 	<p style="text-align: center;">Dr Nigel Ainsworth CRC Australlian Weed Management</p>
12.15 - 12.45pm	LUNCH	
12.45 - 1.45pm	<p style="text-align: center;">Stream Channel Management</p> <ul style="list-style-type: none"> • Replicating natural systems • Working with stream processes • Grade control structures • Sediment stabilisation 	

Day Three cont.

Wednesday 27/10	Session	Presenter
1.45 - 2.15pm	Field projects and construction works <ul style="list-style-type: none"> • Structural works - when to do, when not to do • Successful implementation of works challenged by agricultural land use 	Terry McCormack North East Catchment Management Authority
2.15 - 6.30pm	Group Work <ul style="list-style-type: none"> • Preparation projects 	
6.30 for 7.00pm	<i>DINNER</i>	
8.00-10.00pm	<i>Presentation of Group Projects</i>	

Day Four

Thursday 28/10	Session	Presenter
8.45-12.30pm	Site Visit - Ovens Catchment, structural works, revegetation and willows	Chris Dwyer Terry McCormack
12.30pm	<i>LUNCH / FINISH</i>	

Registration Form

A. PARTICIPANT

Title: Dr Mr Mrs Ms

Name:

Position:

Organisation:

Address:

..... Postcode

Phone(B): (H):

Fax:

Email:

To register for the workshop or attend certain days please complete the registration on the following page and forward it to

Lachlan Campbell
The Centre, Chisholm Street
Wangaratta 3677
Fax: (03) 5721 9994



B. REGISTRATION FEES (by 17 October 2003)

Full Workshop Fee
includes morning teas, lunches, dinners **\$680**
(GST \$36.20)

Day Fee
includes morning tea, lunch **\$265**
(GST \$16.20)

Day attending:

Mon. Tues. Wed. Thurs.

Dinner:

Mon. Tues. Wed. **\$40**
(GST \$3.60)

C. ACCOMMODATION

Full accommodation **\$320**
(GST \$29.10)

Per night x \$80.00 x **Total**
(GST \$7.30) No. of nights

Check in date.....

Check out date.....

TOTAL

NB. Invoices may be raised for payment if required.

Cheque/Money Order made payable to "The Centre"

Bankcard Visa MasterCard

____ / ____ / ____ / ____

Expiry Date: ____ / ____

Cardholder's Name:.....

Cardholder's Signature:.....

We would like to thank the following principal sponsors:



CRC FOR FRESHWATER ECOLOGY

Wise Water Ways
A Stream Rehabilitation Workshop



For further information contact:

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