



# Australasian Chapter

## Newsletter

### IECA (Australasia) Presidents Report.

Michael Frankcombe



In the most recent edition of Erosion Control magazine fellow IECA director Shirley Morrow discussed the inconsistency of erosion and sediment control standards across the USA, and the role that IECA has to play in trying to influence regulators and industry to reduce this inconsistency.

The points that Shirley raised are equally valid in Australia particularly along the east coast.

In the early days it was inconsistency between the states: NSW was generally considered to be the leader of the pack with a very active Soil Conservation Service and later a State Pollution Control Commission which then became the Environmental Protection Authority, Victoria wasn't too far behind but Queensland was way back in third place. In recent times Victoria and Queensland have closed the gap on NSW, both states having fairly robust environmental legislation. I would suggest that NSW Local and State Governments are still more rigorous in the application and enforcement of erosion and sediment control standards than the other two eastern states.

IECA members tell me that there is incredible inconsistency in application of erosion and sediment control standards and enforcement of legislation within states, for example, a member in NSW said that in the road construction industry, projects undertaken east of the Great Dividing Range have very robust erosion and sediment control design and implementation. Environmental legislation is actively enforced by the EPA. In contrast west of the Great Dividing Range, erosion and sediment control design, implementation and enforcement is almost non-existent.

From my personal experience in the road construction and urban development industries in Queensland, I can safely say that there are huge inconsistencies up and down the coast of Queensland. It even varies mas-

sively from city to city that are only a few hours apart by road. A very simple comparison of Townsville and Cairns highlights the inconsistencies. Urban development – Townsville City Council are very proactive with an erosion and sediment control policy, comprehensive education program and a erosion and sediment control professional certification scheme. Cairns City Council have a watered down erosion and sediment control policy that is poorly applied and enforced, some education and no certification scheme.

For the road construction the reverse is true – in Cairns the Department of Main Roads are extremely proactive in ensuring effective erosion and sediment control on even minor road projects. In Townsville however, recent road projects have had very poor erosion and sediment control design and even poorer implementation and enforcement. A frustrated North Queensland based IECA member showed me photos of a major road construction project in Townsville that has some of the most erodible, dispersive soils in Queensland and there wasn't a single sediment basin to be seen. I'm sure that most of you would be aware that temporary sediment control measures such as sediment fence and sandbag check dams will not stop dispersive clays in a rainfall event.

Unlike the US Environmental Protection Authority, Australia's National environmental agency, the Department of Environment and Heritage (previously Environment Australia) does not have a mandate for erosion and sediment control issues nor is there National pollution control legislation. Unfortunately erosion and sediment control is regulated by State agencies and there is variability in standards and the enforcement of those standards at both an inter and intra State level. This variability arises from a lack of technical expertise, political will and limited resources. It is encouraging to see the Queensland Environmental Protection Agency taking some proactive steps in pursuing developers wilfully causing environmental harm through poor erosion and sediment control practice although examples of this are limited and the development industry still hasn't got the message.

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Ben Northcutt (US Executive Director, IECA) & Doug Wimble (IECA President) enjoying the ISCO04 Field Tour.



International Erosion Control Association

### Erosion & Sediment Control Training

#### Seminar, Local Case Studies & Trade Display

**Wed, 22 September**  
**Nowra, NSW**

**Mon, 18 October**  
**Newcastle, NSW**

**Mon, 25 October**  
**Orange, NSW**

**For more information and to register contact the Chapter Office:**

**Ph: 1800 354 322**

**Email:**  
**admin@austieca.com.au**

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## Membership & Training Voucher awarded in recognition of Erosion Control Work. by Nerissa Court (Department Primary Industries Victoria)

Government agencies in South-West Victoria have discovered a new way to encourage skills development and training in erosion and sediment control.

The Department of Primary Industries and the Corangamite Catchment Management Authority (CMA) has recognised the efforts of a local erosion practitioner by awarding a membership and training voucher to the Australasian Chapter of the International Erosion Control Association (IECA).

The recipient of the award Mr Andrew Daffy said he was both pleased and surprised to receive the award.

Mr Daffy is a team leader for Cosworks, the organisation that is contracted to undertake maintenance of roads and infrastructure within the Colac Otway Shire. The Shire is located two hours west of Melbourne in Victoria's high rainfall, South-West.

The particular project Mr. Daffy has been recognised for involved upgrading roading approaches and stream crossings on Shire managed roads within water catchments of the Otway Ranges.

DPI Water Quality officer Ms Nerissa Court said that Mr. Daffy had shown a great deal of innovation and dedication to meeting the challenge of minimising sediment movement into Otway Streams.

The DPI/Corangamite CMA Water Quality program recognises that ongoing skill development and training in erosion and sediment control is essential in order to continually

adapt technical solutions to local conditions. These solutions can also assist Council and the community by ensuring that roads are constructed and designed in a way that actually reduces the maintenance costs and damage from run off water.

Mr Daffy said he was looking forward to finding out more about the IECA, particularly the training opportunities offered for members in regional Victoria.

As part of the membership Mr Daffy will receive a subscription to the Erosion Control Journal and Chapter Newsletters, links to information on latest erosion control techniques and products, as well as opportunities to participate in short courses, workshops and seminars.



*Pictured from left to right; Nerissa Court (DPI), Andrew Daffy (Cosworks), Wendy Briggs (Colac Otway Shire, Environmental Coordinator)*

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IECA and other relevant industry professional organisations have an important role to play in trying to increase the pace of change. The IECA Australasian Board are painfully aware that to influence change to a meaningful extent means lobbying senior Government officials to make erosion and sediment control their priority as well. To do this IECA Australasia has to have a much higher public profile which is very hard to do with a comparatively small membership base. The Board is taking steps to forge strategic links with other like minded organisations such as the Storm Water Industry Association, the Environment Institute of Australia and New Zealand and New Zealand Water and Waste Association. Collectively we should be able to achieve a lot more.

At the grass roots level the Board and staff are working to bring our technical training program to more regional centres across Australia. There are a lot of people in the industry struggling with erosion and sediment control issues. Our agenda is to get our technical training courses out to as many people as possible. Details of upcoming technical training courses can be found on page 1 of this newsletter and on our website. Obviously running technical training takes time and money and I would like to take this opportunity to thank the organisations that sponsor our training programs. A small contribution makes a huge difference.

*Michael Frankcombe  
IECA (Australasia) President.*

### **Managing Urban Stormwater: Soils & Construction - Vol 1. (Revised "Blue Book")**

*Now available. Email: [stormwater-trust@epa.nsw.gov.au](mailto:stormwater-trust@epa.nsw.gov.au) or  
[www.dec.nsw.gov.au](http://www.dec.nsw.gov.au)*

## Tunnel Erosion Short Course in Tasmania - Tim Duckett (Chapter Director)

The identification, management and rehabilitation of dispersive soils in urban environments is rapidly being recognised as a critical issue for engineers, local government and developers today, particularly in the current litigious environment. Recent research in Tasmania is demonstrating that dispersive soils are far more widespread than previously thought and is the source of many hidden problems for land users, both urban and rural.

A workshop was developed and delivered to provide developers, planners, environmental health officers, building surveyors etc with the knowledge and understanding of the issues associated with construction and development on dispersive soils.

It examined:

- Case studies and examples of problems associated with development & construction on dispersive soils: cut/fill, pipes and services, septic systems, dams, and roads.
- Management of dispersive soils, revegetation, soil amendments, repairing tunnel erosion, and compaction

The course aimed at improving understanding by assisting in the

- Identification of soil types susceptible to dispersion.
- Understanding how and why dispersion occurs.
- Understanding the different soil dispersion / sodicity tests.
- Identifying appropriate management options for development on dispersive soils.

- Understanding methods and difficulties associated with repairing tunnel erosion.

The course was organised through the University of Tasmania and was presented by Marcus Hardie, Land Management Officer, DPIWE, John Paul Cumming, Sustainable Forest Management Pty Ltd and Tim Duckett of Land Management and Rehabilitation Services (IECA)

The course was attended by 18 professional ranging from local government to consultancy firms. Discussions are being held to determine if a similar course can be provided to construction contractors including Telstra and gas reticulation companies.

## Subdivision Construction Project - Rachel Pearce

Sediment-laden run-off, concrete residue, brick cutting slurry, solid construction waste, litter, spills of chemicals (particularly fuel) and dust deposition from subdivision construction activities can all have an adverse impact on our waterways.

In order to combat this threat, over the past 14 months City of Casey, Mornington Peninsula Shire Council, Cardinia Shire Council, EPA Victoria and Melbourne Water conducted a project designed to prevent stormwater pollution from subdivision construction sites. The project was funded by the Victorian State Government through the Victorian Stormwater Action Program, which is administered by EPA Victoria.

The project involved the development of a process, in which a model planning permit condition is used to require the submission and implementation of a Site Environmental Management Plan (Site EMP). In developing this process the project compared and contrasted the use of *auditors* versus the use of *council staff* to check the submitted Site EMP's and visit sites to verify their implementation.

A series of tools were developed as part of the project to facilitate the process. Key tools developed include model planning permit conditions, Site EMP Kit (assists in the development of a concise, practical and easy to use Site EMP), Council Site EMP Checklist and educational materials.

The project showed that both EPA ap-



pointed auditors and council staff can ensure effective environmental performance on subdivision construction sites. However, the use of auditors can be restrictive as their audits do not provide ongoing surveillance and they can be expensive.

Based on the findings, the project recommends that councils utilise their internal

staff to administer the process. The use of auditors is only considered beneficial if industry does not raise its standards with the introduction of the council administered process or for high risk sites where council staff does not have the expertise to ensure the sites are adequately managed.

A project launch, which will be integrated with an educational forum for council staff and industry personnel, is scheduled for August. Attendees will be involved in two workshops relating to environmental protection measures and the model process and tools. Although a date is not yet set, expressions of interest for attendance are being sought. Further information will be circulated to those that express interest as it becomes available.

Contact Rachel Pearce at City of Casey on (03) 9705 5296 or [rpearce@casey.vic.gov.au](mailto:rpearce@casey.vic.gov.au) for further information or to register interest for the launch/educational forum. Copies of the project report and tools (including the Site EMP Kit) are available on the Clearwater website [www.clearwater.asn.au](http://www.clearwater.asn.au).

## ISCO 2004 - Field Day - Bill Gardyne

As part of the ISCO conference held in Brisbane last month, Bill Gardyne organised an Erosion and Sediment Control Field Day for both delegates and the general public. The site chosen was that used by Rowing Queensland, an area leased from South-East Water, who manage the Wivenhoe Dam. Erosion issues were prevalent for the following reasons.

- The soils are dispersive with only a shallow A-horizon protecting them.
- The site faces south, and is well-shaded, so growing conditions for ground cover are impaired.
- Traffic (foot and vehicles) occurs in

several intense periods during the year, with 3,000 visitors a day for several weekends in Feb/March and July/August.

Whilst Rowing Queensland has a responsibility for maintaining the site, addressing E&S issues was outside both their expertise and budget. Addressing the issue was considered important as the site drains into the main water supply for SE Qld. The release of sediment is likely to aid in the proliferation of blue-green algae through phosphorous release. Treating water so affected increases water treatment costs by up to 20 times.

Holding a field day at this location was considered advantageous because:

- It enabled the outline of an E&S plan to be developed.
- Products could be installed as part of the demonstrations in the worst affected areas.
- Treatments could be trialed for future treatment.
- It brought together a significant intellectual resource to address a complex problem.



The day was hugely successful with most exhibitors being surprised at the level of interest, particularly from government institutions, and a few orders have resulted. The old 80:20 rule was in effect with most of the major erosion issues being addressed with a series of berms, reinforced turf, and gravel treatments.

As well, all who asked were shown the correct methods for silt fence installation on off-set slopes.



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We're on the web!  
[www.austieca.com.au](http://www.austieca.com.au)

## 2004 IECA (Australasia) Board and Committee Members.

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### Ian Kiernan, OA, OAM

Patron

### Sandra Lanz

Communications Officer,  
[slanz@austieca.com.au](mailto:slanz@austieca.com.au)

## Presidents Technical Tip - Turf & Reinforced Turf Michael Frankcombe CPESC.

### Description:

Refers to a layer of topsoil and grass harvested from the field by specialist machinery. Rolls typically can be supplied up to 5 m wide by 9m long. Reinforced turf is similar to conventional turf except that grass is grown through an artificial 2 dimensional poly-propylene grid to provide additional strength.

**Application:** Turf and Reinforced Turf can be used in both sheet flow and concentrated flow situation to provide erosion protection. It is often used as a "softer" alternative to "hard" channel linings such as rock and concrete in urban situations.

### Design/Construction Aspects:

Turf is only capable of withstanding relatively low flow velocities ( 2 ms<sup>-1</sup> up to 0.35m deep). Suppliers claim that Reinforced Turf can withstand flow velocities up to 4 ms<sup>-1</sup> up to 0.5m deep. Deposited sediment can kill turf. For this reason upstream erosion protection and sediment detention measures must be installed before the turf can be placed. As turf and reinforced turf rely on the grass root system for strength, the substrate on to which the turf is being placed must be suitable for vegetation establishment. The edges of the turf/reinforced turf must be installed flush with the existing soil surface



Typical use of turf in a concentrated flow environment

so that erosion along the turf/soil interface does not occur.

### Problems:

Due to the way reinforced turf is grown, the roots can become "root bound" and therefore the time for the roots to bind into the soil surface is increased thus increasing the erosion/failure potential. Turf must be watered until adequately established. It must also be maintained throughout its life to prevent weed and other non-desirable species invading the established grasses.

The use of slashers and mowers to reduce grass height may damage the turf particular if the skids are dragged along the surface or tractor tyres are driven along the invert during wet conditions.



Poorly installed and maintained reinforced turf showing erosion along the turf/soil interface and weed invasion of the turf grasses

### ISCO 2004

#### Conference Proceedings.

The ISCO 2004 Conference Proceedings are available for purchase.

Cost: \$AU60 plus postage

Contact: Jennae Stephens, Ph: +61 7 3844 1138

Fax: +61 7 3844 0909, Email: [isco2004@icms.com.au](mailto:isco2004@icms.com.au)

## Coming Events

National Landcare Awards, 1 September 2004, [www.nsw.ipaa.org.au](http://www.nsw.ipaa.org.au)

Gardening Australia, 2 - 5 Sept 2004, Sydney Showground. [www.gardeningaustralia.com.au](http://www.gardeningaustralia.com.au)

Biodiversity - why care? Workshop 6-10 Sept, 2004, Mackay, Qld. Ph: 07 3295 9560

International conference on ECO-ENGINEERING: "the use of vegetation to improve slope stability", Thessaloniki, Greece, 13 - 17 Sept, 2004. [www.ecoslopes.com](http://www.ecoslopes.com)

Greening Australia - Restoring Native Vegetation - Introduction to Ecological Vegetation Classes, 16 September 2004, [www.greeningaustralia.org.au](http://www.greeningaustralia.org.au)

SIA Qld, Stormwater Awards, 23 September 2004, [siaqld@stormwater.asn.au](mailto:siaqld@stormwater.asn.au)

SIA Seminar - Stormwater, Greywater & Wastewater re-use, 23 September, 2004 [www.stormwater.asn.au/nsw/events.asp](http://www.stormwater.asn.au/nsw/events.asp)

LoGov Exp 2004, 6 - 7 Oct, Logan City Qld, [www.logov.net](http://www.logov.net)

GreenX 2004, 28 - 30 October Sandown Racecourse, Melbourne. [www.greenx.com.au](http://www.greenx.com.au)

Pollutec China 2004, 3-5 Nov, 2004, [www.pllutec-china.com](http://www.pllutec-china.com)

SIA Vic Annual Awards, 3 November 2004, [www.stormwater.asn.au](http://www.stormwater.asn.au)

WSUD2004, Cities as Catchments, 21 - 25 November 2004. Adelaide, Australia. [www.plevin.com.au/WSUD2004](http://www.plevin.com.au/WSUD2004)

SIA National Awards, 22 November 2004, Adelaide, [siasa@stormwater.asn.au](mailto:siasa@stormwater.asn.au)

IECA Seminar & Trade Display - Erosion & Sediment Control Products, 22 September, Nowra, 18 October, Newcastle, 25 October, Orange, [admin@austieca.com.au](mailto:admin@austieca.com.au)

Managing Urban Stormwater: Soils and Construction, Workshops, Port Macquarie, 1 Sept, Sydney City (1) 6 Sept, Merimbula, 8 Sept, Sydney City (2), 13 Sept, Central Coast/ Newcastle, 15 Sept. [gebi-asig@epa.nsw.au](mailto:gebi-asig@epa.nsw.au)

Ozwater Watershed - The Turning Point, Convention & Exhibition, Townsville 5 - 7 May 2005, Brisbane 8 - 12 May 2005. [www.awaozwater.net](http://www.awaozwater.net)