



**GOULBURN
BROKEN**
CATCHMENT
MANAGEMENT
AUTHORITY

Municipal Infex

January 2007

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Local Government in Victoria has been estimated to spend almost \$600 million every year on environmental programs, demolishing once and for all any suggestion that councils are interested only in "roads, rates and rubbish".

The Municipal Association of Victoria's (MAV) "Local Government Environmental Survey - 2006"

identifies 25 different types of new environmental activities carried out by councils, ranging through community support, strategic and statutory planning, on-ground projects, incentives and local laws.

Many of the new programs have emerged in the past decade, many also without additional funding, again raising the issue of cost-shifting as a major impost on councils and ratepayers.

The survey shows local government is actually leading the way in areas such as greenhouse and climate change, with more than 60% of councils implementing

programs through International Councils for Local Environmental Initiatives (ICLEI), Cities for Climate Protection (CCP) and regional greenhouse

alliances.

78% of councils now employ at least one environmental officer dedicated to natural resource issues.

The 2006 survey again confirmed a large difference between the environmental priorities of rural and metropolitan councils and in their capacity to pay.

Many rural councils reported they wanted to do more on the environmental front, but simply could not afford the resources. The two main limiting factors for councils are funding shortages and competing priorities.

More than 80% of councils see management of native vegetation, wetlands, stormwater and waste as their four highest priorities.

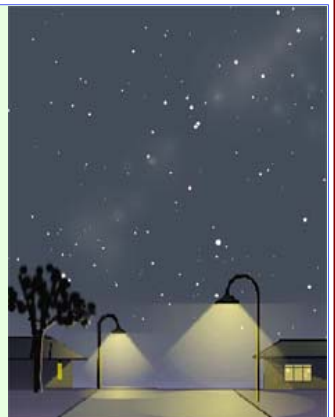
Biodiversity, roadside management, energy conservation and water sensitive urban design also have high priority.

An increasing majority of councils have given formal recognition to their regional

Waste Management - \$ 250 million
Land Management - \$ 185 million
Water Management - \$ 35 million
Biodiversity & Habitat - \$ 20 million



Street lighting, which wastes up to 80% of the energy it consumes, is the biggest single contributor to local government's greenhouse emissions. But that is about to change as Greenhouse Alliances take up the challenge. See Page 14 for details



Goulburn Broken Greenhouse Alliance for 2007 - See Page 3 for details

Big \$pender\$.

High Priorities x % of Councils

- Waste & Recycling 83%
- Stormwater 78%
- Native Vegetation 70%
- Waterways & Wetlands 70%
- Water Quality 68%
- Community Education 66%
- Roadside Conservation 57%
- Pest Plants 57%
- Energy & Greenhouse 57%
- Water Use Management 55%
- Local Sustainability 51%
- Litter Management 51%
- Domestic Wastewater 39%
- Pest Animals 25%
- Soil Erosion 21%
- Coastal & Foreshore 21%
- Salinity 14%
- EMS 14%
- State of Environment Reporting 13%

(Continued from page 1)

catchment strategies, either as reference or incorporated documents in their local planning schemes.

But the survey also drew out issues which should concern catchment management authorities, such as:

- A 15% drop in the number of councils which view salinity and land management as a high priority.
- Most councils reported they are "satisfied" with their relationship with their local CMA, but more than half described it as "limited".

Key benefits local government sees in regional catchment strategies are:

- Strategic approach to NRM
- Accessing funds
- Resource sharing
- Helping deliver council NRM objectives

The survey confirmed the growing involvement of local government in natural resource management, reinforcing the need for this wide range of activities to be coordinated with regional catchment strategies.

Strategic Plans in Place

- Stormwater Management 91%
- Waste Management 81%
- Native Vegetation 67%
- Greenhouse 64%
- Roadside Conservation 60%
- Litter Management 59%
- Green Purchasing 59%
- Biodiversity 55%
- Energy Conservation 53%
- Pest Plant Management 53%
- Local Conservation 52%
- Pest Animal Management 47%
- Sustainable Water Use 45%
- Riparian Protection 44%
- Natural Heritage 43%
- Wetlands 41%
- Domestic Waste Water 36%
- Firewood Management 28%
- Environmental Indicators 27%
- Coastal/Foreshores 24%
- State of Environment Report 21%
- Salinity Management 19%
- EMS (ISO 14001) 15%
- Genetic Modification 5%

North East Greenhouse - Momentum for Change

The momentum around dealing with climate change has accelerated in the last 6 months and so has the support for the North East Greenhouse Alliance (NEGHA).

Membership in the Alliance has grown to include 7 councils, the North East Catchment Management Authority and LaTrobe University at committee level and a variety of additional members involved in projects including North East Water, the North East branch of the Environmental Protection Authority, Alpine Valleys Agribusiness Forum and even the Ovens and Murray Football League.

The Alliance has spent 2006 setting strategy, developing project plans, establishing partnerships, creating community awareness and chasing project funds.

The hard work has paid off.

A pilot program has been designed to engage with 15 local schools in 2007 to increase awareness of greenhouse and other sustainability issues and to support and work with them to reduce their energy consumption. Students get involved in the entire process from collation of information for the audit, to development and implementation of energy saving and other sustainability actions and monitoring results.

NEGHA is partnering the Ovens & Murray Football League to

deliver a water and energy efficiency program in their sporting facilities. The Kicking Goals for the Environment project seeks to combine the football lifeblood of the region with strong efficiency messages. To get the message out to the community, the project team is developing an environmental education campaign for the coming season that will showcase energy efficient technologies throughout the league's 10 sporting facilities and will pit the clubs against each other in a sustainability competition. The aim is to implement simple, cost-effective energy and water efficient technologies that can be related to similar technologies for use in homes or businesses.

Councils in the Alliance have united with councils from other Victorian Alliances to implement new technologies to reduce greenhouse emissions from public lighting. Working with electricity distributors and retailers under the watchful eye of the Essential Services Commission the aim is to improve lighting quality while significantly reducing energy costs and greenhouse gas emissions.

NEGHA has also joined forces with the Alpine Valleys Agribusiness Forum to facilitate a regional workshop looking at the potential for bio-fuel crops, manufacture and end use in the region. The workshop will be held in April 2007.

Funded by the Department of Sustainability and Environment, the

(Continued on page 4)

Goulburn Valley Greenhouse Alliance for 2007.

Formation of a Goulburn Broken Greenhouse Alliance (GVGA) now appears imminent after a decision by the Goulburn Valley Waste Management Group to act as facilitator.

A board meeting in December authorised Executive Officer, Nick Nagle, to follow up on "strong interest" from municipalities and the Goulburn Broken CMA in establishing an alliance to fill in the gap between existing groups in the North East and North Central catchments.

Letters are now being sent to the six member councils of the GVWVG (CoGS, Moira, Campaspe, Strathbogie, Mitchell and Murrindindi) asking for a meeting to discuss the issue and form a management committee to oversee formation of an alliance.

Other organisations, such as the Rural City of Benalla, Shire of Mansfield, GBCMA, water authorities and industry (particularly food processors) will be invited to participate.

A Goulburn Broken Greenhouse Alliance would provide a local focus for the rising profile of greenhouse and climate change adaption programs, many of which are now being done through programs such as CCP (Cities for Climate Protection) and ICLEI (International Council for Local Environment Initiatives).

There is also the question of funding, with concern about declining financial support for waste management groups, with the large majority of landfill levy funds now being directed to programs other than waste management, particularly into greenhouse.

Sustainability Victoria, which allocates funds from the landfill levy, has provided grants to 29 projects worth \$6.47 million, of which only seven projects, worth \$1.145 million (16.6%), were for waste management.

Of these, only three (6%) went to local government projects.

Likewise, there were no grants for waste management approved in the first round of Local Sustainability Accord funding, while more than \$230,000 went to greenhouse projects.

There have been some suggestions that DSE is supportive of a Goulburn Broken Alliance and may be prepared to fund a full-time coordinator, provided there is demonstrated community support.

With probable membership of up to eight municipalities, GBCMA, water authorities, industry and community groups, and the support of neighbouring alliances, a Goulburn Broken Greenhouse Alliance should be able to demonstrate community support as well as the strong partnerships which are also favoured by funding providers.

Nick Nagle says the GVWVG is keen to avoid any suggestion that it is taking ownership of greenhouse organisation, saying the group is acting in response to community interest and because it is probably best positioned, given its close alignment to greenhouse issues through its waste management programs.

Consideration had been given to other options, such as expanding the North East and North Central alliances into the "middle ground", but that was decided against for fear of the groups becoming too unwieldy.

Mr Nagle says the core business of the waste management group will continue to be solid waste management and the Zero Waste Strategy, but it does have a charter to "do what is locally relevant".

There is ample precedent, with several waste management groups in other regions already expanding to take on greenhouse issues.

He points out there are many synergies between the two, with the Waste Management Group having the same community of

(Continued on page 4)

Moving In

A laser-grading project on a property near Strathmerton is on hold for a while after a pair of bush stone curlews moved into the middle of the paddock to set up their nest.



The pair was first noticed "coming and going" about three weeks ago. Soon after the farmer's son moved into the paddock with the laser grader, he noticed the birds taking it in turns to sit on a nest, while the other would walk over to bushland to forage for food. The farmer says the birds seem un-phased by tractors working in the adjacent paddock. The bay they have taken up residence in will be left for the birds until they have finished their nesting and the young have been reared.

Addendum Progress

Development of a local government addendum to the Goulburn Broken Regional Catchment Strategy is continuing as part of the strategy's scheduled review.

The addendum is being developed to clearly spell out the mutual roles, responsibilities and expectations between the Goulburn Broken CMA and municipalities of the region.

It will be the first time councils have had an opportunity to say what they need and expect of the catchment management authority to support local government in its expanding role in natural resource management.

While the CMA may be responsible for catchment management, local government provides many of the crucial mechanisms, such as strategic and statutory planning, for its implementation and support. How to best use these mechanisms will be one of the major issues to be addressed in the addendum, which will also specify how the CMA can best support local government by providing financial and in-kind assistance, coordination, specialist

skills and data.

Municipal Catchment Coordinator, Colin James, is holding talks with councils in the Shepparton Irrigation Region over the next two months to update them on the addendum and to encourage them to take best advantage of the opportunity to fully inform the CMA about local government needs and priorities.

Questionnaires will then be distributed seeking to have all issues identified prior to a workshop in early 2007 to develop a more detailed table of contents for the proposed addendum.

In the meantime, the MCC is also participating in the reviews of the five CMA programs to identify local government issues from a CMA and departmental point of view. A similar questionnaire and workshop process will be used to identify emerging issues and any problems with existing processes.

The MCC says he is keen to use the addendum process to raise the profile of land use planning, but the main purpose of the addendum will be to improve the mutual understanding between the CMA and councils and to provide practical working assistance to council officers working in natural resource management, sustainability and other areas relevant to the regional catchment strategy.

North East Greenhouse Alliance - Momentum for Change..ctd.

(Continued from page 2)

Alliance is working with the CSIRO and URS Australia to scope out with the community, strategic directions on how sectors of the North East can be best assisted to prepare for and adapt to impacts of climate change. The vital component of this project is to involve a wide range of people from the North East in discussions, workshops and feedback surveys.

Greenhouse Alliances are proving to be an effective tool for regional action on climate change issues.

NEGHA is looking forward to working with the Goulburn Broken in the formation of Greenhouse Alliance in the Goulburn Valley region.

Goulburn Valley Greenhouse Alliance for 2007..ctd.

(Continued from page 3)

interest, with similar membership and many overlapping issues. The group also has an existing structure, network and reporting processes. It is authorised to establish sub-committees under Resource GV, which is the proposed structure for the GVGA.

It will be proposed that members of GVGA sign a Memorandum of Understanding under the DSE Regional Partnerships Program to secure mutual obligations, funding management and contract responsibilities.

Key responsibilities being considered are developing a Goulburn Broken Greenhouse Strategy and a number of projects for submission to the next funding round in mid 2007.

Mr Nagle says there appears to be strong interest in establishing a Goulburn Broken Greenhouse Alliance and that will now be tested. "If it gets legs and takes off, that will be great. But, if it doesn't, there is no harm done"

MURRAY VALLEY DRAIN 11 - AT LAST

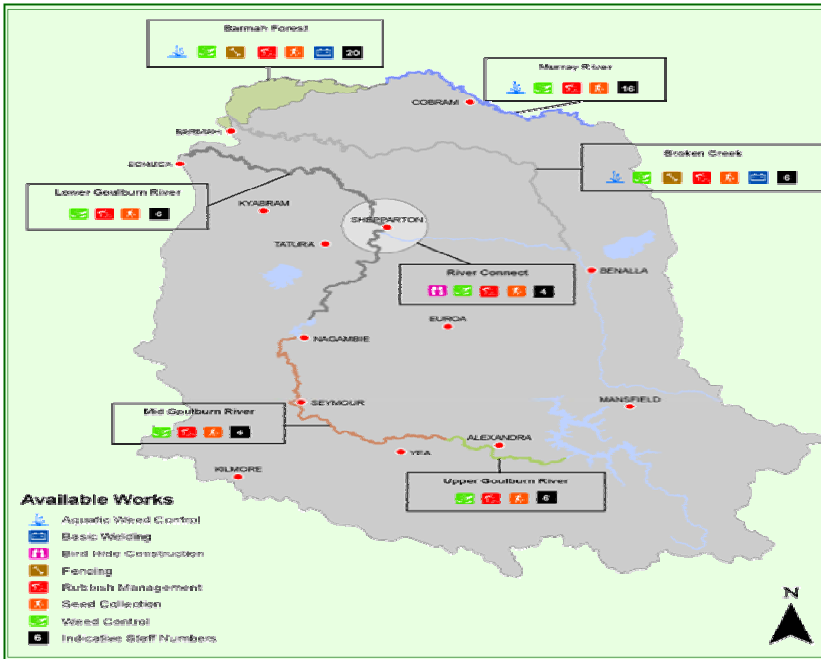


After years of protracted negotiations, construction of Stage 1 of the long-awaited Murray Valley Drain 11 has commenced.

When finished, the scheme's 65 kilometres of primary and 8.5 kilometres of connecting drains will service more than 14,000 hectares of land.

Stage 1 starts at the Broken Creek outfall downstream of Fairman's Bridge and consists of 1.4 kilometres of open drain, a pump station, fencing, drainage inlets and minor farm works. It is expected to be finished in 12-18 months.

The project is funded through the GBCMA's Shepparton Irrigation Region Surface Water Management Program and will help reduce pasture waterlogging and watertable accessions and provide water for wetlands and other wildlife habitats.



Drought Program

Staff selection and training has commenced in the \$2.7 Drought Employment Program being run by Goulburn Broken CMA to assist drought and frost-affected farmers and farm service providers.

Two thirds of the available funds will be spent in the Shepparton Irrigation Region to employ about 60 people to carry out environmental works programs on heritage and icon rivers over the next six months. Particular sites include the Murray and lower Goulburn Rivers, Broken Creek and the Barmah Wetland.

Work will include fencing, weed control, seed collection, rubbish management and basic construction.

Five Year Permits

Council planning departments in the Shepparton Irrigation Region will soon be asked by the Department of Primary Industries to extend the standard term of planning permits for community surface water management schemes.

Most permits are now issued for two year terms, but DPI will ask the standard term be extended to five years, which is more in line with the time taken to develop the projects.

DPI Surface Water Management Officer, Kym Ockerby, says the schemes apply for permits during the survey and design stage. Given the extensive consultation involved in finalising the design and gaining landholder approval, almost all projects take longer than two years and have to apply for a permit extension, adding an unnecessary complication.

Informal talks will be held with planning staff prior to a formal letter being sent to each council requesting a standard five year permit life.

Rural Land Use Strategy

The shires of Campaspe and Moira and the City of Greater Shepparton are combining resources to develop a Rural Land Use Strategy to provide consistent application of the new Rural Zones introduced by the State Government. Consultants will be engaged early in 2007 to review existing planning schemes and advise how the new zones can give the best outcomes for agricultural land-use in the region. One of the priorities is to bring consistency between the municipalities in matters such as minimum lot sizes. Campaspe Shire Planning Manager, Richard Whiting, says the project will better enable councils to accommodate the many changes that are occurring in agriculture, such as irrigation reconfiguration and new enterprises, while providing for an effective, sustainable and viable future for agriculture and the environment. The project will develop necessary planning scheme amendments and the rationale for their implementation.

Red Gum Study

VEAC has received a record number of submissions about its latest discussion paper in the River Red Gum Study.

VEAC (Victorian Environment Assessment Council) says more than 1,000 people and organisations put in the time and effort to lodge formal comments - twice as many as any previous report.

A spokesman said VEAC more than happy with the number and very grateful for the submissions, some of which are "very substantial". He said a "lot of good new information" is contained in the comments. VEAC will acknowledge all submissions in coming weeks and then spend "substantial time" extracting key information to assist in developing draft



proposals, due out in mid-2007. This will be followed by another 60 day consultation period.

The VEAC study is investigating the condition, management and use of riverine red gum forests and their associated wetlands and will make recommendations on their future management.

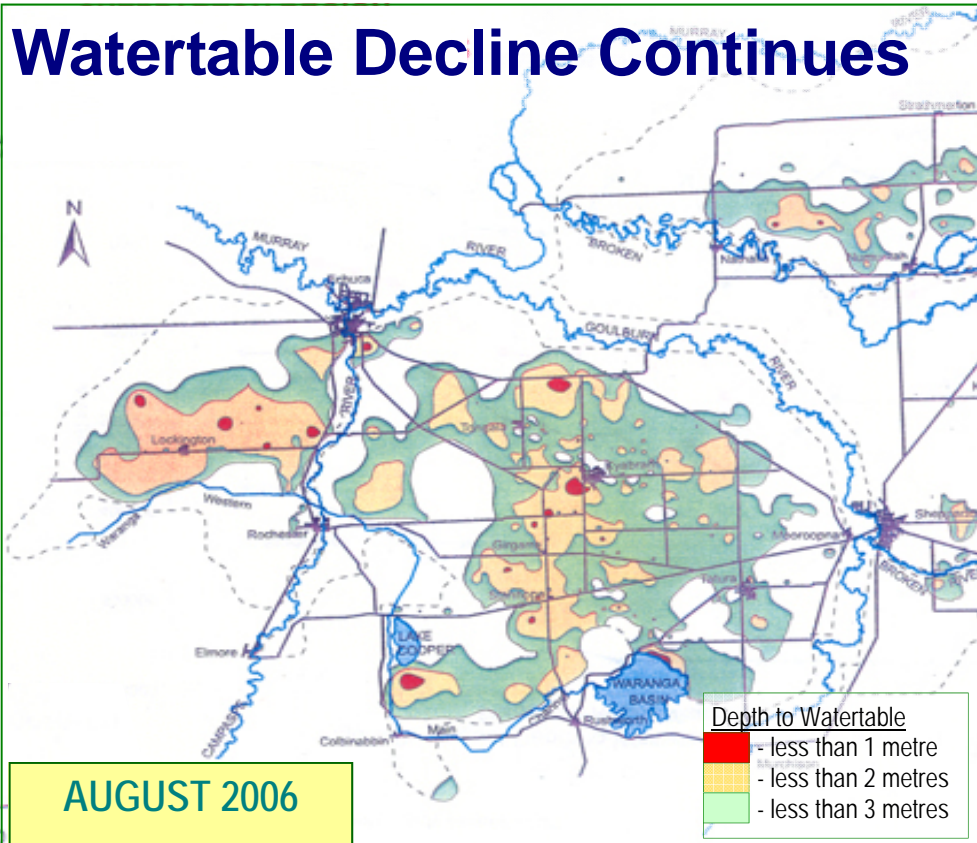
Watertable Decline Continues

Despite a near record drought, almost 200,000 hectares (32%) in the Shepparton Irrigation Region remains at risk from high watertables.

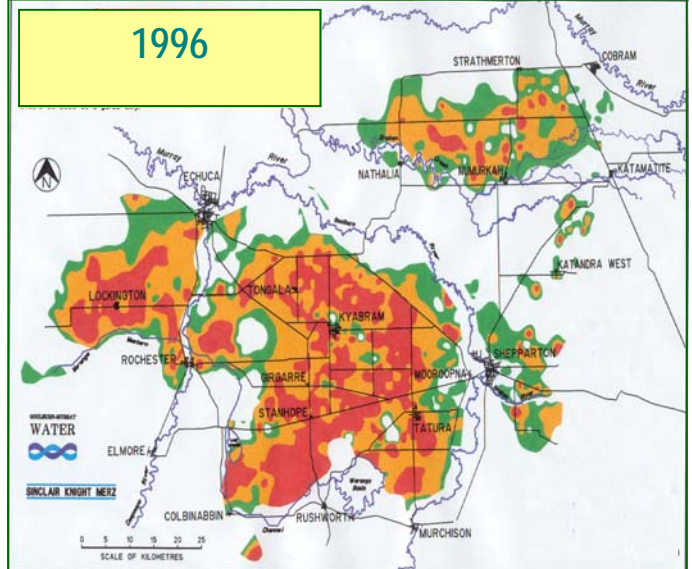
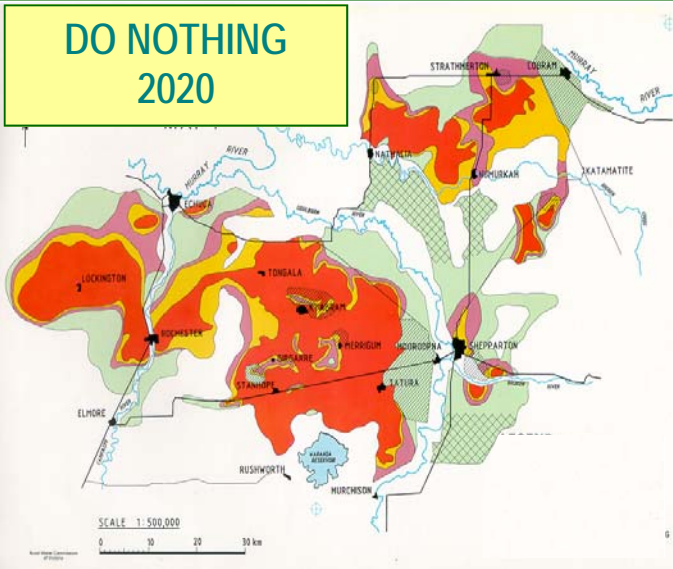
The latest map for 2006 shows 185,000 hectares with a watertable within three metres of the soil surface, 83,000 within the two metre root zone and 2,200 within one metre.

The decline in watertable levels is the result of many factors, including the drought and the subsequent decline in water-use and irrigation intensity, improved irrigation efficiency and the work done under the region's surface and sub-surface water management programs.

While the area at serious risk is 45% less than the 337,000 hectares measured in 1996, researchers say the problem is far from going away. They are certain the water level will rise again when wet conditions return. It is not possible to predict by how much.



AUGUST 2006



SIRIC MEETS AT MOIRA

The Shepparton Irrigation Region Implementation Committee concluded its 2006 round of regional meetings at Moira Shire in September. The meeting gave councillors and staff an opportunity to discuss local issues and priorities directly with the committee. SIRIC received special briefings on a number of subjects from council staff, including native vegetation issues and Moira's work in developing protocols for managing council activities to preserve roadside biodiversity.

THREE NEW FACES AT SIRIC

Three new community representatives have been appointed to the Shepparton Irrigation Region Implementation Committee, with two existing members re-appointed to serve another term.

SIRIC is the main working group of the GBCMA charged with implementing the Goulburn Broken Regional Catchment Strategy in the Shepparton Irrigation Region. Its annual budget is \$18.8 million.

New members of SIRIC are:



John Gray, a retired school teacher, is well known for his extensive experience in local government. He has also served on the GBCMA Board and the Catchment & Land Protection Board. He has particular interests in the environment, sound sustainable land planning principles, floodplain management and best utilization of our finite water resource. jpc.gray@bigpond.com



Helen Reynolds is an irrigation grain farmer and enthusiastic conservationist with a background in ecology and natural resource management. Helen is an active member of the Goulburn Valley Environment Group, Victorian Farmers' Federation and the Victorian Irrigated Cropping Council. Her interests are: improved environmental management on farms and enhanced protection and management of public land.

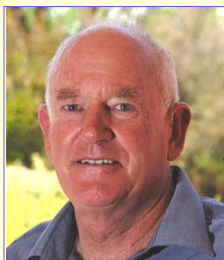


Roger Wrigley is a geotechnical and environmental engineer and soil scientist employed by the University of Melbourne at Dookie College. His research and practice is related to soil, water and waste management. The CMA engagement ensures the relevance of his teaching and research. rwrigley@unimelb.edu.au

Members reappointed for another term are:



Peter Gibson, Chairman, SIRIC, is a dairy farmer and business manager from Nanneella and is involved in Landcare, water service committee and Sub-Surface Drainage Working Group. Peter is passionate about the use of water and its impact on our future environment. He plays a mean guitar. petegibson@fastmail.fm



Peter McCamish, Deputy Chairman, SIRIC, is a retired orchardist from Ardmona with a strong interest in salinity and the environment. He sees enormous challenges facing the catchment in water and land-use, while still increasing agricultural outputs. petermc@mcmmedia.com.au



Allen Canobie is an irrigation farmer from Numurkah who has been involved in environmental management since the early days of SPPAC. Allen also has extensive experience in local government. His main interests are surface drainage, partnership building, improved farming practices and revegetation. acanobie@bigpond.net.au



Steve Farrell is a dairy farmer from Echuca with strong links to the UDV. Steve is concerned with all aspects of environmental management and believes it is important for the community to understand the long term benefits from implementing on ground works through the regional catchment strategy.



Nick Ryan is an irrigation dairy farmer near Kyabram interested in sustainability and natural resource management. He believes strongly in community consultation and keeping the public informed about the work being done in catchment management. rying@iinet.com.au

The new-look SIRIC held its first meeting at the Shire of Moira in September (see Page 6), where Chairman, Peter Gibson and Deputy Chair, Peter McCamish, were re-elected to their positions.

FACE-TO-FACE CONTACT IN 2007

Following the success of this year's regional meetings at municipalities in the Shepparton Irrigation Region, SIRIC is planning a similar round of face-to-face contact with councillors and staff in 2007.

The Committee will hold one meeting on-site at each council's offices through the year, encouraging councillors and staff to meet with the committee to discuss local issues and priorities in natural resource management, particularly relating to the regional catchment strategy.

Councillors and staff attending the 2006 meetings said they found the contacts very informative and useful.

SIRIC members say the feedback from local government is important to their program, with the face to face meetings providing for very effective communication of what is needed on the ground.

Proposed dates for 2007 meetings have been circulated to Councils for comment. The suggested dates are:

- City of Greater Shepparton 27 April
- Campaspe Shire 27 July
- Moira Shire 26 October.

The on-site meetings are in addition to an annual visit from CMA and SIRIC board members to a briefing session at each council and regular briefings from the Municipal Catchment Coordinator.

Native Vegetation -

Native Vegetation has a special profile in this edition of Municipal Infex because of local government's central role in applying planning controls through the State Government's Native Vegetation Framework .

More than 12 months after the rollout of the "New Approach" some of the issues yet to be resolved include:

- Lack of resources and specialist skills.
- Incomplete policies and planning tools.
- Planning recognition of under-story and native grasses.
- Offset management, auditing and compliance.

- Third party offsets and payments-in-lieu.
- "Small" trees.

Councils are also heavily involved in natural asset and biodiversity mapping and developing roadside management strategies even though, in many cases, responsibilities for "who does what" remain unclear.

Moira Shire has organized a CMA-funded steering committee to establish biodiversity risk management protocols for roadside conservation.

Then there is the proposal for a catchment or regional offset trust account to manage payment-in-lieu funds.

Proposal for Regional Offset Trust Account.

A proposal will soon be put to local government in the Goulburn Broken and North East catchments for a single regional trust account to manage payments-in-lieu generated under the Native Vegetation Framework.

This would replace a process in which each council would establish its own trust account and management committee to oversee the planting and long term survival of offset plantings required as conditions of vegetation clearance permits.

The proposal is that a single offset trust account be established, covering the entire catchment or region, managed by a catchment management authority or Department of Sustainability & Environment.

It will be suggested that the single fund would reduce overhead and administrative burdens on councils, while still providing for offsets generated by the process to be planted in the municipality they came from.

Reduced overheads and economies of scale would also generate more on-ground plantings.

In informal talks, local government has shown some interest in the idea, which would pass on responsibility for finding land, planting and managing the offsets for the required ten year term, to the manager of the trust fund.

Some LGA's have said they do not have the resources or skills to manage offset planting, particularly when it applies to under-story and native grasses which, to date, have not had a high profile in native vegetation permit process.

Councils can apparently see some benefits in passing the responsibility to a CMA or DSE, which have proven track records in revegetation works and can ensure the plantings are done in accord with the catchment vegetation strategy - a requirement of the framework.

A working group comprising CMA \ DSE and local government representatives has been set up to explore the idea in greater detail and develop a firm proposal to be put to

local government for consideration early in 2007.

The group has had informal discussions with a wide range of local government councillors and staff and reports there has been generally positive feedback, subject to concerns that there be adequate consultation, transparency and accountability.

The group is also suggesting that the payment-in-lieu option, which has had a low profile to date, be the preferred method for managing offsets generated under the "standard path" of the native vegetation planning process.

Municipal Catchment Coordinator, Colin James, says payments-in-lieu have not been well regarded, being viewed by some working group members as a "license to clear" . However, working through the processes had changed the opinion to one where a payment-in-lieu could ensure a more reliable outcome than the current system in which landholders and developers are responsible for planting and managing offsets.

The experience with self-managed offsets so far has been pretty dismal, with anecdotal evidence suggesting more than 90% have never been planted or have not survived.

"If, instead, a payment in lieu is made and those funds are used to successfully establish an offset, the final outcome is a vast improvement on what is happening now and net gain might actually be achieved. That is certainly not the case at present"

Mr James said provisions under the framework for "like for like" and "same biodiversity region", as well as established reporting and accountability processes of a CMA or DSE, would ensure local government could clearly see where its offset funds were being spent and the successful outcomes.

He said a draft proposal will be circulated to local government early in 2007, with extensive consultation to follow.

- the Challenge Continues

It's Not Easy, Being Small

Gary Deayton, Roadside Project Manager working on joint projects for Moira Shire and CoGS, has taken up the cudgel on behalf of "small" native trees that have apparently been overlooked in the Native Vegetation Framework.

Under the current rules, trees which are less than 40cm diameter ABH (at breast height) are classified as "small" and, as such, have relatively low status in the native vegetation permit process and require only minimal provision for offsets.

However, as Gary points out, some indigenous trees in the Goulburn Broken catchment, such as black box (right) and buloke, are very slow growing, so even an 80 year old tree might still be classified as "small".

This means they can be easily removed from the landscape and, when they are, there are inadequate offsets required to compensate for the loss of such valuable vegetation. The matter has been referred to DSE, GBCMA and a number of local forums to lobby the state government for the native vegetation framework to better define "small" trees to recognise the environmental value of slow-growing native species.



Native v Indigenous - A Big Difference

In recent years, many thousands of native trees have been planted in the Shepparton Irrigation Region in an effort to recover some of the 97% of natural bush which has been cleared since European settlement began.

But despite the best of intentions and hundreds of thousands of dollars spent, much of it by private landholders, many of the potential environmental benefits have been missed because of a mistaken belief that as long as "native" plants are used, everything is OK. Regrettably, it is not that simple.

While a flowering eucalypt from, say, Western Australia, might be a "native" plant, it is not "indigenous" - that is: it is not native to this region and, as far as the local bugs, grubs, animals and birds are concerned, it is a "foreigner".

So while the "native" tree might look wonderful to us humans, it could be contributing very little to the local biodiversity. In fact, it could be having a negative impact, taking up space that could be inhabited by a local plant or by enticing creatures out of their natural feeding and breeding cycles.

Another common problem for non-indigenous plants is that they may not regenerate because essential triggers, such as seasonal rain or pollination methods, are missing in their new environment. They might look like they are thriving, but actually have no viable seed, leading to plantations of trees all of the same age with no younger ones coming along to replace them. Or, if they do set viable seed, it can contaminate the gene pool of nearby indigenous species.

Contract botanist for Campaspe Shire, Pat Ward, has seen many examples of tree-planting projects where inappropriate species



They look the part to us humans, but these *Eucalyptus occidentalis* (Swamp Yates), planted on a local roadside, provide very limited biodiversity benefits and can spread like a weed.

have been used.

"It's a shame that so much of the good work done by well-meaning people has missed the mark because the trees they planted were not from local stock.

"Planting native trees is better than exotics, or doing nothing at all", he says, but it is sad that some, including public authorities, have gone to the trouble and expense when, for the sake of not using the right species, they have achieved only part of the ecological benefits an indigenous plant would generate.

His advice is to look at the local natural vegetation and try to fill in the gaps using seed from the same area.

DPI Native Vegetation Officer, Suzanne Johnstone, agrees and says the location, soil type and adjacent species should determine what is planted, not what looks good or is on special at a nursery.

"Sometimes it is best not to plant trees at all. Some sites are best suited to shrubs or grasses, which are just as important to the

(Continued on page 12)

Agreement on Landcare Management

A new support structure for the region's Landcare network is being considered in the Goulburn Broken catchment.

The aim of the review is to clarify the responsibilities of, and improve coordination between, the various organizations involved in managing, supporting and implementing the various Landcare programs in the region.

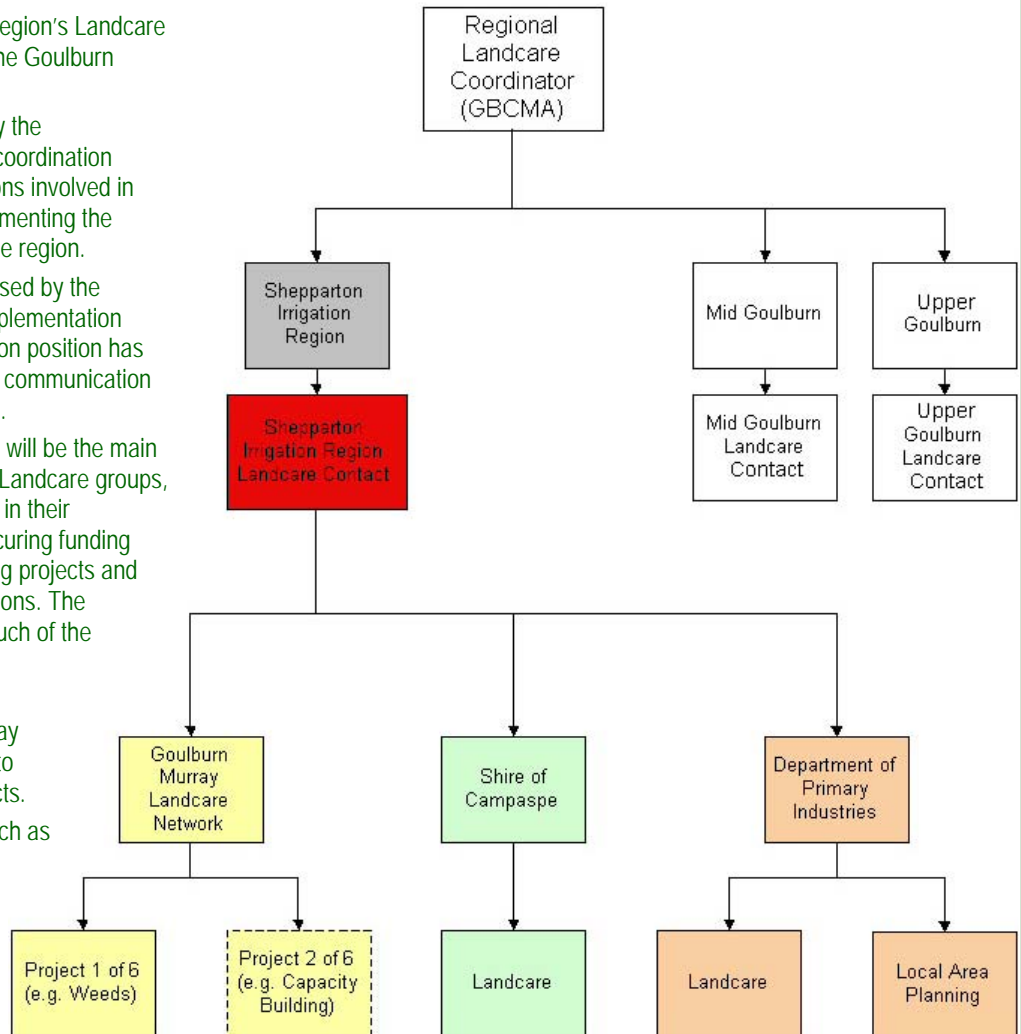
Under a proposal recently endorsed by the Shepparton Irrigation Region Implementation Committee (SIRIC), a coordination position has been upgraded to provide better communication between the CMA and Landcare.

It has also been agreed that DPI will be the main body for supporting community Landcare groups, with officers to assist the groups in their administration and reporting, securing funding and other resources, coordinating projects and generally facilitating their operations. The department will also carry out much of the community education role.

The region's umbrella Landcare organisation, the Goulburn Murray Landcare Network will continue to concentrate on on-ground projects.

Other existing arrangements, such as funding local government Landcare activities, will continue as normal.

Further information on the Landcare program is available at www.gbcma.vic.gov/landcare & LAP.



MANAGING ROADSIDE BIODIVERSITY

A joint project between Moira Shire and GBCMA is developing risk management protocols for roadside biodiversity which will be of value to all municipalities in the catchment.

In a region with only 3% of its native vegetation left standing, council-managed roadsides are among the most significant remnant corridors but are often suffering from inappropriate activities such as over-grazing, blanket-spraying, ploughing for fire-breaks and road maintenance works.

A reference group set up to inform the project about local issues has attracted enthusiastic membership from other councils and agencies including Vicroads.

Project Manager, Gary Deayton, says there is a strong emphasis on practicality. "We already know the risks. What we are concentrating on are practical ways of managing them so we can protect our roadside biodiversity".

The project is also developing a training program for council staff involved in roadside management.

Some draft protocols have already been developed and, when completed, will be used to review Moira Shire's Roadside Management Plan.

The protocols are available for all other municipalities to use and, while there is no compulsion to do so, project organisers are hopeful they will be adopted across the region to provide for consistent outcomes.

Further details on the project can be obtained from Moira-based Roadside Project Officer, Gary Deayton on : 5871 9222

Water, Water, Everywhere

• National water consumption 2004-05 **18,767 Gigalitres, 3,000gl (15%) less than 2000-01**

• Agriculture 65%, households 11%, water supply industry 11%, manufacturing 3%, mining 2%, electricity & gas 1%

•Agricultural consumption 2004-05 **12,191gl, 23% less than 2000-01. Rice 631gl (72% less), Cotton 1822gl (37% less).**

Sharing Experience

Councillors and a senior manager from Campaspe Shire have inspected Kinnairds Wetlands in Numurkah to see how a combined community effort can turn a "useless bloody swamp" into a valuable community asset.

Crs. Kevin Simpson and Ian Maddison and General Manager - Corporate Services, Peter Mangan, travelled to Kinnairds in November to meet with Moira Shire councillor, Ross Nicholl and Environment Manager, Paula Tovey, to inspect what had been achieved at Kinnairds through the combined action of the Muckatah Surface Water Management Scheme, Moira Shire, community groups and landholders. Goulburn Murray Water's Sam Green was also there to explain the wetland's vital role as a retardation basin and nutrient soak for the Muckatah scheme.

The idea of the trip was to see how the Kinnairds experience might apply to the Kanyapella Basin, near Echuca, which now has a draft management plan awaiting sign-off by partnership agencies.

Like Kinnairds, Kanyapella is a highly significant wetland which has been degraded through years of inappropriate management and changed flood patterns, leading to an ecosystem which is under serious stress.

The 3,000 hectare red gum, black box shallow freshwater marsh and meadow wetland, is well known for its profusion of native grasses which are known to burst into life given the right environmental triggers.



Councillors and managers from Campaspe and Moira Shires discuss the wide range of benefits achieved through the redevelopment of the Kinnairds Wetland near Numurkah and how similar opportunities are available for the 3,000 hectare Kanyapella Wetland near Echuca..

While much larger, Kanyapella has a lot in common with Kinnairds, which was redeveloped as part of the Muckatah surface drainage scheme.

Community groups and landholders, organised through a Kinnairds steering committee set up by Moira Shire, have since installed shared paths, picnic facilities and two bird hides, which are now attracting scores of visitors to the wetland.

Similar opportunities are available for Kanyapella Basin, following development of the management plan through GBCMA's Environment Program.

The aim of the plan is to restore more natural flood patterns to the wetlands to encourage regeneration of the environment as prime habitat and breeding ground for a host of rare and endangered species.

The management plan is also an essential first step in making the wetland eligible for an environmental water allocation. It contains wide-ranging recommendations covering hydrology, water quality, land use, salinity, vegetation, wildlife, cultural heritage and reserve status. The plan does not recommend an



During their tour, the Campaspe group was shown the workings of the fish ladder installed in the Broken Creek at Numurkah. Here, GBCMA Riverine Health Program Manager, Wayne Tennant, explains how the ladder allows fish to get past stream barriers, like weirs, so they can migrate upstream to their natural spawning grounds.



DPI Environment Team Leader, Alex Sislov and Native Vegetation Officer, Jo Deretic, explain some of the features of the Kanyapella Management Plan to the Campaspe group.

end to grazing, rather that a strategy should be developed to ensure grazing is carried out for a range of benefits, including economic, fire management and biodiversity.

It also suggests a steering committee be established to provide community input into plan details and their implementation. When the management plan is signed off by the partnership agencies, including DSE and Parks Victoria, all stakeholders will be contacted with a view to establishing the committee to move the project towards more detailed design and implementation.

The Kanyapella Plan is expected to be adopted by early 2007.

CAMPASPE ROADSIDE SURVEY

A survey of roadside vegetation throughout Campaspe Shire is nearing completion and has generated some exciting discoveries of rare and endangered species of flora and fauna.

Botanist Pat Ward has spent many months studying roadside reserves in the Goulburn Broken catchment area of the shire, which will add to already done in the North Central catchment.

Data is now being transferred onto a GIS mapping system which will identify the EVC (Ecological Vegetation Class) of each roadside reserve in the shire. This will enable Campaspe to better manage the roadsides which, along with river reserves, are among the most significant stands of vegetation remaining in the region.

Pat Ward's survey work has confirmed a number of very high value road reserves, some of them in excellent condition. He has also been able to ground-truth earlier survey work done in the area in the late 90's by DSE and DPI.

The survey covers canopy trees, understory and ground flora. Pat has also noted significant stands of vegetation on adjacent private land which he says adds to the value of roadside plants because of their wider extent.

Among his finds have been some plant species thought to have been extinct in the region, including grasses, herbs and sedges, which have often been overlooked in previous surveys.

"Every road is different and they cover the complete range, from the very best right down a sliding scale to some that are pretty far gone.

"This survey will mean council will have a much better understanding of what vegetation they have on their roadsides and



Campaspe roadsides are known for their wide range of biodiversity, including significant areas of native grasslands.

what its value is. They will know what remnants are there and what is worth preserving".

He says there are many high value roadsides in the shire which need protection through careful management.

Grazing should continue, he says, but only under careful management. Permits should be issued for each grazing, with followup checks to make sure there has been a positive result. He recommends sheep, rather than cattle, be used to help control weeds and fire loads on

roadside reserves. "Cattle can do too much damage, especially if it is wet."

Spraying weeds is very hard to get right he says. "Blanket spraying is worse than not spraying at all".

Council staff and spray contractors have to be carefully trained to ensure they target the right weeds at the right time and do not inadvertently wipe out colonies of rare or endangered plants.

"Mass extinctions don't happen. What wipes out these colonies is gradual erosion by inappropriate grazing or spraying or allowing weeds and other species to take over. It is gradual, but inevitable, unless these sites are carefully managed."

Pat says there will also be a need to follow up the survey work because many of the plants, particularly the grasses and groundflora, are highly seasonal.

"There's no doubt I will have missed some because they simply aren't there at the time I do my survey. I found some very significant plants earlier this year but, if you went back now, there would be no sign of them."

The roadside survey will be used to update Campaspe Shire's Roadside Management Plan, which will be available for public comment later this year.

Native vs Indigenous...ctd

(Continued from page 9)

ecology as trees."

She says DPI is happy to advise landholders and shires about correct species, sourcing indigenous plants, site preparation, planting and maintenance.

Landholders might also be eligible for incentives for site preparation, tree stock (\$2.50 / plant), weed control and fencing (\$5 / metre), provided the work is carried out to an approved plan and meets minimum standards. (Contact DPI 5833 5222)

But not everyone agrees that only indigenous plants should be used.

Geoff Lodge, DSE Biodiversity Team Leader - Goulburn Broken, says the indigenous argument "can sometimes be carried too far".

"The fact is, our landscape has changed, mainly as the result of human activity. High watertables, salinity, acidification and new

flooding and drainage patterns mean we have created a new landscape - one in which the indigenous vegetation can no longer thrive, or even survive.

"97% of our indigenous vegetation has been removed. Clearly, what is planted in its place needs to be managed but, given the massive changes to our landscape, now is not the time to be too concerned about what is planted, because it is a definite improvement."

Geoff says that in an ideal world, we would plant only indigenous varieties but, faced with our ongoing challenges, we have to adapt.

"So long as it is managed to protect and enhance our biodiversity, non-indigenous native vegetation is an appropriate part of revegetation programs.

"What is really good about the revegetation that has taken place is that it represents a complete shift in community attitudes from when native vegetation was seen as a handicap to now, where it is seen as a vital part of our landscape."

WETLANDS PRIORITISED

A process is being developed to prioritise more than 2,000 wetlands in the Goulburn Broken catchment.

The system will assist in allocating limited resources for preservation and restoration works programs.

The system is based on a matrix in which environmental significance and the level of threat are combined to give an overall ranking.

Azolla Harvest Trial

A trial to physically remove the aquatic weed, Azolla, from the Broken Creek has been a great success.

Goulburn Murray Water and the GBCMA joined forces for the three week experiment, using a machine hired from Ballarat, where it had been used to remove aquatic weeds from Lake Wendouree.

The machine was set up on an in-stream gate at Kennedy's Weir to collect the weed as it came through the gate and convey it to the stream bank into a waiting truck.

One challenge was to break up the azolla blanket, which ranged from 6cm to 300cm thick, so it could travel downstream to be collected by the machine.

An environmental water allocation was used to "pulse" higher water flows down the creek to help break the weed up. Boats were also used to chop the weed into manageable clumps. Another challenge was the occasional strong wind that blew the weed back against the creek banks, rather than letting it follow the water flow to the harvester.

GM Water says the trial achieved the main goals of proving the weed could be collected by the machine and delivered into trucks on the adjacent banks without adding to the risk of downstream colonisation. It usually took about ten minutes to fill a four metre tip truck.

For the trial, three people were used to man the harvester, but in normal operation only two would be required.

Before large scale harvesting can be carried out, GM Water is developing procedures for the 24 hour operations necessary to get maximum benefit from the environmental water used to break up the weed and carry it downstream to the harvester.

Another challenge is to find an outlet for the harvested azolla. For the trial, the weed was disposed of on-farm, where it will rot away, but for large scale harvesting, a major outlet needs to be developed. This could be as fodder, fertiliser or mulch. Azolla is highly nutritious and is used widely around the world as a stock feed, particularly for pigs and poultry. It is also used as a green manure crop for rice.

GBCMA is now carrying out investigations to ensure harvested azolla can be safely used as animal fodder in local conditions. If so, it is hoped an outlet, even a market, can be found allow larger scale harvesting to be carried out.

The trial harvest, which removed about 120 cubic metres of the weed, cost approximately \$18,000.



At the trial site, the blanket of azolla was "only" between 6cm and 30cm thick, but in other parts of Broken Creek it can be half a metre deep.



The trial showed the harvester can collect about 2.5 cubic metres of azolla weed per minute of azolla and deliver it to a truck on the adjacent bank.



Many tonnes of azolla can be harvested, but the trick is: what to do with it once you've got it in the truck? Fodder, fertiliser or mulch - or all three?

Victoria's greenhouse alliances have combined to challenge "unfair and unreasonable" pricing structures imposed by some energy suppliers which are making conversion to new energy-saving street lighting technology unviable.

The Central Victoria Greenhouse Alliance (GVGA) gained support from a number of other alliances, took the case to the Essential Services Commission (ESC), which agreed the pricing structure for converting from inefficient mercury vapour lighting was "unfair and unreasonable" but declined to act further because of a lack of legislative power.

Public lighting accounts for up to 70% of local government's CO₂ emissions, its biggest single source of greenhouse pollutants, yet it remains one of the most inefficient of all energy users. It should be one of the most achievable targets for greenhouse gas reduction programs, yet councils' efforts have been frustrated by what they describe as artificial barriers imposed by energy suppliers to cover the perceived risk in adopting new technology. Greenhouse Alliances argue the technology has been proven in many other countries and the risks have been exaggerated.

It has been claimed energy producers do not want to reduce overnight lighting because it would cause too much fluctuation

between peak and non-peak base loads for electricity generators.

Late in 2006, greenhouse alliances held a meeting with energy suppliers and the ESC, where a Technical Working Group was formed to look at best options.

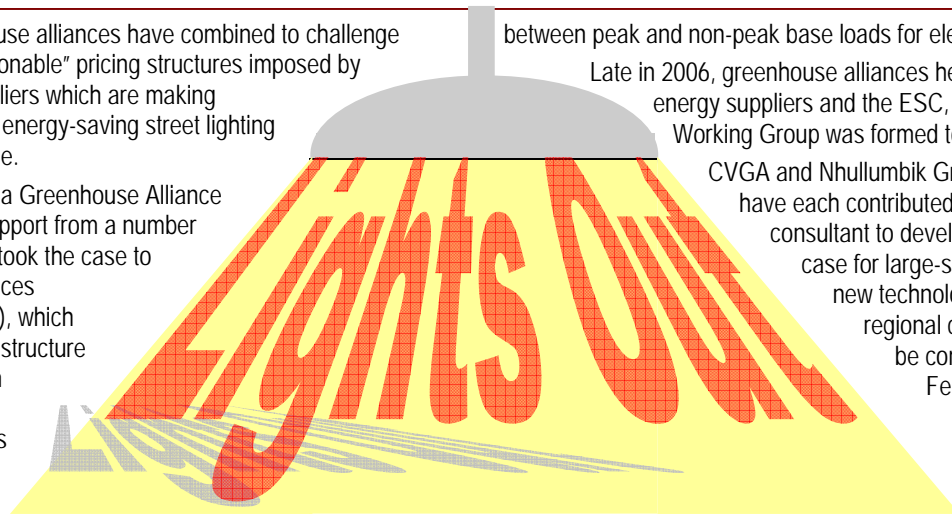
CVGA and Nhullumbik Greenhouse Alliance have each contributed \$8,000 to employ a consultant to develop a detailed business case for large-scale conversion to new technology in a number of regional centres. The report will be completed by the end of February.

Electricity suppliers will then be invited to submit

quotations for the conversion, which will be compared against the consultant's estimates. If there is an "unreasonable" difference, the plan is to return to the ESC and, if that does not produce results, to approach the Minister seeking an independent evaluation.

In the meantime, the Northern Alliance for Greenhouse Action (NAGA) is conducting a three year project to develop sustainable streetlighting programs for each of its eight member councils, with all information being made available to other councils through their local greenhouse alliances.

Sustainability Victoria is also funding 19 trials of alternative street lighting technology at councils around the state.



Some Light on the Subject

Grid lighting accounts for about 2.5% of Australia's total energy bill, with as much as 75% wasted because of over-lighting and bad design and placement. Estimates range from \$80 - \$200 million a year in wasted electricity and around two million tonnes of carbon dioxide.

In world terms, public lighting costs an estimated \$455 billion per year, with carbon dioxide emissions equivalent to 70% of the world's cars, yet it remains one of the most inefficient energy users of all.

Simple steps like fitting cut-off reflector shields can deliver the same light to the ground while halving the necessary wattage. Shielding also reduces glare, light trespass, lost amenity and sky-glow - the bane of astronomers worldwide. Sensible lighting levels, timers and motion sensors generate further energy savings of 20-50%. New technology can cut this by a further 25-70%. Scientists say many of our public lighting policies are based on myths that people feeling more secure with bright lighting and there will be less crime. Both have been disproved. Information from the International Dark Skies Association www.darksky.org and the Astronomical Society of Victoria www.asv.org.au



Europe at night, showing the extent of light pollution - about one billion dollars a year in wasted energy. In Italy, they have decided to reduce night lighting in their cities by as much as 44% simply so they can see the stars again.

Lighting facts

- \$50 million - annual cost of street lighting to Victoria's councils
- 30-75% - Energy savings available with new lighting technology.
- 30-50% - Light wasted by a typical street light by radiating into the sky.
- \$80 -200 million - Annual national cost of wasted energy due to inefficient exterior lighting programs
- 397,000 plus - Estimated tonnage of coal burned required to provide this wasted energy.
- US\$1.6 billion - Annual cost of street lighting in the USA.
- Zero - difference in crime rate between brightly-lit areas and those

with best practice (low level) lighting

- 2-3 Number of stars which can be seen with the unaided eye from a typical city street in Europe, USA or Japan.
- 800 - Number of stars which can be seen with the un-aided eye from a typical suburban street in Melbourne
- 1,200 to 1,500 - Number of stars which can be seen with the un-aided eye from a typical street in a medium-sized country town
- 8,000 to 10,000 - Number of stars which can be seen with the unaided eye in an unpolluted dark sky

Knowing Your Dairy Farms

The annual irrigation farm survey carried out in the Central Goulburn, Rochester-Campaspe and Pyramid-Boort Irrigation Areas has again produced some interesting results on dairy, cropping and grazing properties (the Central Goulburn component covered only dairy farms).

The final document, released in October 2006, and soon to be on the GBCMA website (www.gbcma.vic.gov.au), is based on information from the 2004-05 irrigation season.

This latest report has taken a new approach to some of its information, making better use of data from local government and water authorities to overcome some gaps in previous surveys.

The survey results have shown a wide range of farming practices and attitudes between irrigation areas.

Some of the points to emerge are:

- More than 50% have whole farm plans. Of those who don't, 5-8% are planning to develop one in the coming year.
- Most properties have recycle dams, but there is a wide variation between Central Goulburn (91%) and Pyramid-Boort (50%).
- The trend towards automatic irrigation continues, ranging from 11% in Central Goulburn to 5% in Pyramid Boort.
- 11% of farms have fenced off some remnant vegetation.
- Central Goulburn farmers have planted an average 250 trees in the past five years, Rochester-Campaspe 440 and Pyramid-Boort 1,200.
- The top three on-farm projects planned for the next three years are to improve irrigation efficiency, laser grading, irrigation scheduling and planned drainage.
- The biggest barrier to improving irrigation practices is lack of financial resources (50%), followed closely by uncertainty over water allocations (47.1%)
- Water trading is felt to have a positive impact on profit, ease of operation and the ability to budget water.
- 43% of dairy farmers plan to be still operating in ten years, while 35% plan to sell up within five years.
- 48% of cropping and livestock farmers plan to still be operating in ten years, with 29% planning to sell within 10 years and 23% within five years.
- 52% believe their farm will pass on to a family member, while 48% do not. Passing the farm to a family member reduces to 38%



The number of trees planted on farms ranges from 250 in five years in the Central Goulburn Area to 1,200 in Pyramid-Boort.



Improvements to irrigation efficiency are among the highest priorities in upcoming projects for dairy farmers, with whole farm plans, laser grading, irrigation scheduling and improved drainage making up the top four. The trend towards automated irrigation is also continuing.

if that member has a university education.

- 83% of dairy farmers strongly believe their farm will still be irrigated in five years, while mixed farmers are not so sure (64%).
- More than 80% of mixed farmers are satisfied or very satisfied with community life, while for dairy farmers the figure is 70%.
- Almost 80% of farmers are involved in at least one community group. 59% are involved in two or more. 42% attend their groups more than 20 times a year.
- 26.9% of farmers think their quality of life will be worse or much worse in five years, 50.2% think it will be unchanged and 16.5% think it will be better or much better.

Farmers \$\$\$\$\$

An Australian Bureau of Statistics survey has shown farmers spent \$3.3 billion on weed, pest, land, soil, native vegetation and water management in 2004-05. 92% of farmers reported they performed some form of environmental work, with an average spend of \$28,000.

Weeds and pest animals were the most common problem, with more than \$1.1 billion spent on their management.

Two-thirds of farmers reported a lack of financial resources and time were the greatest barriers to them doing more NRM. Most agreed there was enough quality information available to assist them. More information on the survey is available from www.abs.gov.au

Some Quick Facts

- 670,000 hectares of land in Victoria are currently at risk of becoming saline. This could increase to more than 3 million hectares by 2050.
- In 2006, after ten years of drought, 185,000 hectares (32%) of the Shepparton Irrigation Region still had the watertable within three metres of the soil surface.
- 44% of Victoria's plants and 30% of its native animals are extinct or threatened.
- Per capita, Victoria's total waste rose by 40% between 1992 and 2002, despite having one of the highest recycling rates.

A quarterly newsletter about local government issues and involvement in natural resource management in the Shepparton Irrigation Region. For the information of municipal councillors and staff, Goulburn Broken Catchment Management Authority and other agencies involved with local government in the natural resource management partnership.

Edited by Colin James
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To Be Frank

A bloke signals to a passing taxi, which promptly stops to pick him up.

He gets in and asks the cabbie: "Thanks mate. Is your name Frank?"

"No", says the cabbie, "I'm George"

"Oh, I was sure your name would be Frank, because you're just like him. I mean how you were passing at just the right time, keen-eyed enough to spot my signal and courteous enough to pull over to pick me up"

"Who's Frank?" asks the cabbie.

"Ah he was a wonderful bloke. You know he was smart, handsome, well-mannered and he really knew how to treat women. All in all a terrific family man."

"Yeah, but....."

"He was a hard worker too, but he never overdid it. If he was needed at home to do jobs, or take his missus shopping, he was always available. Made lots of money too. A wonderful provider and never complained about the bills".

"So he's mate of yours' is he, this Frank?", asks the cabbie.

"No, I never met him. I just married his widow."

NATIVE VEGETATION TRAINING SURVEY

A survey has been sent to all municipalities in the catchment seeking comments on the training program for the "New Approach" to the Native Vegetation Framework carried out by DSE in 2006. Stage 1 of the program included six sessions for local government planning and environmental staff covering the "New Approach", requirements for a native vegetation removal permit and pre-application site visits. Responses to the survey will help plan the Stage 2 of the training, which includes assessments of standard path applications, offset requirements and permit conditions. It is hoped the outcome of the exemptions review will be available to be also included in the program. The 2007 program is expected to commence in February / March, subject to availability of policy reviews. Responses to the survey have been requested by 22 January 2007. Further information from Gary Smethurst, Natural Resource Management Officer, DSE Benalla, on 5733 1222.

- Value of irrigated agriculture 2004-05 \$9.1 billion
 - Farm Gross Domestic Product 2006-07 (est.) \$21.5 billion, down \$4.8 billion or 18.4% less than 2005-06
 - National Gross Domestic Product to fall 0.5% in 2006-07, largely because of decline in agricultural production.
 - Irrigated agriculture contributes 25% of farm GDP from less than 1% of farm area.
- Source: Australian Bureau of Statistics

"If extreme dry conditions continue...sustainable flows for the full length of the Murray River could be a challenge".
Murray Darling Basin Commission, E-Newsletter, January 2007

COMING EVENTS

February

2 - SIRIC

5 - MCC briefing CoGS

8 - Goulburn Broken Environmental Planning Forum

12 - MCC Briefing Moira

15-16 MAV Local Government NRM Coordinator's Forum

21 - MCC Steering Committee

22 - VLSN

March

5 CMA/SIRIC briefing at Campaspe

23 - SIRIC

April

27 - SIRIC at CoGS

30 MCC briefing at Campaspe

May

3 - Goulburn Broken Environmental Planning Forum

7 - CMA/SIRIC Briefing Moira

11-12 Victorian Regional Waste Management Forum - Echuca

16 - MCC Steering Committee

31 - VLSN

June

1 - SIRIC

July

16 - MCC briefing CoGS

26 - Goulburn Broken Environmental Planning Forum

27 - SIRIC at Campaspe Shire

30 - MCC briefing Moira

August

15 - MCC Steering Committee

30 - VLSN

September

7 - SIRIC

October

15 - CMA/SIRIC briefing at CoGS

18 - Goulburn Broken Environmental Planning Forum

26 - SIRIC at Moira Shire

29 MCC briefing at Campaspe

Hot Facts

• Atmospheric carbon dioxide has risen by 31% since 1750.

• Current levels of atmospheric carbon dioxide are the highest in 42,000 years, perhaps in two million years.

• Temperatures in south east Australia are expected to rise by 0.3 to 1.5 degrees Celsius by 2030.

• On a planet-wide scale, temperatures could rise by up to 5°C by 2070.

• In northern Victoria there will be three times as many days over 35°C

• By 2030, runoff into local rivers could drop by: Goulburn River - up to 25%, Loddon Campaspe and Broken Rivers - up to 35%, Upper Murray - up to 20%.



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