North Central Waterwatch

catchment care

Summer Edition # 3
February 2011

Regional Update

Hello Waterwatch Monitors

I hope you all had a safe and wonderful Christmas and very happy New Year!

I spent Christmas with my family. We decided to go camping on Majors Creek which is located just outside of Puckapunyal. It was lots of fun; the weather was beautiful and we were lucky that we could have a little camp fire! We spent most of our time kayaking, lying around in the hammock and cooking and eating lots of food!! I think my son Finn had a great time too - I couldn't get him out of the water or the kayak the whole time. ☺

Over the last few months Waterwatch has been very busy organising events, catching up with monitors and getting prepared for the River Detectives program which recommences in March! We have been very lucky to secure some funding to employ a part time facilitator, Kelly Dunn. Kelly will be working three days a week. Her role will be to deliver the River Detectives program over the next couple of months – see page 5, 'Waterwatch at Schools' for details. *It's great to have you on board Kelly!*

I would also like to let you know that, at the end of last year, Britt Gregory returned from maternity leave. Britt is working on the Kerang and Gunbower Wetland Enhancement program; but, I am happy to say, we have managed to get Britt doing some Waterwatch Activities – this will include looking after River Detectives and Waterwatch Volunteers in the Kerang and Gunbower area. *It's great to have you back too Britt!*

Eliza Eden Wallbank

A BIG 'congratulations' to Nicole and Stu on the arrival of your new baby girl on the 20 February 2011. Nicole had Eliza Eden Wallbank who weighed 9 pounds 8 ounces! Mum and bub are doing well, and are proud to say she is adorable…

From
Cass Davis

WATERWATCH North Central
Communities Caring for Catchments

NORTH CENTRAL Catchment Management Authority
Connecting Rivers, Landscapes, People

Contents

Landcare Covers More Ground

On Saturday 12 February 2011, North Central Landcare, City of Greater Bendigo and Mid Loddon Landcare Network shared a marquee at the Bendigo Farmers Market to showcase the great work Landcare does in the North Central region.

The February market was not only a produce market but a Sustainable Living Festival. This was a great opportunity to introduce Landcare to people that were not aware of the movement. It was also great opportunity for fellow Landcarers to catch up and talk about the work that they have been doing.

The Bendigo Farmers Market is held on the 2nd Saturday of every month next to the Information Centre in Bendigo.

If you are in the area it is highly recommended!

Story by Jodie Odgers
Regional Landcare Coordinator
North Central Catchment Management Authority

Meet Anne Perkins

"What are you doing?" is a common question from passersby as we do our monthly Waterwatch testing along Forest Creek in Castlemaine. Our test sites are highly visible to the public as people walk, run or cycle along the Great Dividing Trail which runs beside the creek.

When I explain that I'm a member of Castlemaine Landcare Group, and that we're testing the water quality in the creek, people always want to know "Is it OK?" It's nice to be able to tell them that our creek is in pretty good health.

Forest Creek is a tributary of the Loddon River. It rises on the south-west side of Mount Alexander, and runs through Expedition Pass Reservoir on its way to Chewton and Castlemaine.

In the 1850s, Forest Creek was a hive of activity as miners extracted gold from one of the richest alluvial deposits in the world. The natural environment of the creek was almost totally destroyed in the frantic search for gold. Most of the native vegetation was removed.

Anne's story continues page 3….

The surrounding land was dug up, dredged and sluiced. After the gold rush ended, human activities continued to affect the creek. The town of Castlemaine grew up along the banks. The course of the creek was redirected away from the town centre by building a massive stone wall. Gutters were built to channel storm water to the creek. Market gardeners grew vegetables along the creek flats, and farmers ran sheep and cattle further upstream.

When Castlemaine Landcare Group was formed in the early 2000s, we decided that restoration of Forest Creek would be our main project. At that time, the creek environment was heavily degraded. The creek was choked with silt, with almost none of the deep waterholes that older residents of Castlemaine remembered. The banks and flats were infested with gorse, blackberries, silver poplars, willows, phalaris and other weeds. Isolated clumps of grey box and red box, and cumbungi and phragmites in the stream bed, were almost the only examples of native vegetation.

The Landcare Group adopted a 4km section of creek in a region known as “Happy Valley”, between the Greenhill Avenue footbridge and Zeal Bridge at Colles Road. In the past eight years or so, we have worked closely with Department of Sustainability and Environment, North Central CMA and Mt Alexander Shire Council. Works to restore the creek included: removal of weeds, dredging waterholes to remove silt buildup and of course planting thousands of indigenous plants.

We knew it was important to monitor our activities to see if they were effective. We initiated a range of monitoring activities, one of which is our monthly Waterwatch testing. We’ve been participating in Waterwatch since December 2005, and have now collated 5 years of data at four separate sites along the creek.

‘The first site is at the upstream end of our Landcare work, and the last site is at the downstream end. We hope to be able to identify whether our revegetation works have any impact on the water quality of our creek. Other monitoring activities undertaken by the Castlemaine Landcare Group include regular photographic recording, macro-invertebrate surveys of the water holes, frog surveys, creek habitat assessments and monthly bird surveys.

Being part of the Waterwatch team has been very rewarding. Regular walks along the creek to our test sites allow us to experience the creek in all its different moods, from ice in winter, to stagnant pools seen in summer, to the amazing power of the recent floods.

We’ve been able to see how the creekscape has changed as our revegetation efforts have come into fruition.

Anyone who would like to know more about the work of Castlemaine Landcare Group is welcome to visit our website at:
http://northcentral.landcarevic.net.au/castlemaine

Site 1: view from Zeal Bridge over Colles Road, looking west along the creek, April 2007. This is typical of the creekscape in Happy Valley prior to restoration, with very little native vegetation apart from reeds in the creek bed and isolated eucalypts.

Site 3: deep pool in Happy Valley, 2011. George (Anne’s husband) is doing the Waterwatch testing. The pool appears much deeper and wider after the recent floods which have removed a lot of the reeds from the stream bed. The gorse and blackberries have gone, and the plantings in the background are starting to change the landscape.

Story by Anne Perkins
Forest Creek Waterwatch Monitor

Summer Waterwatch Activities

Life in our Water

Over the summer break, Waterwatch teamed up with Conservation Volunteers Australia (CVA) to deliver a summer program to community called *Life in our Water.* The event was held over three separate days at different sites: Lake Tom Thumb, Reservoir No.7 and Lake Weeroona.

Over 40 community members came along to discover what living creatures lurk beneath the surface of our urban wetlands. I had the opportunity show the community how we collect macroinvertebrates or 'water bugs' from the waterway and explain why we can use water bugs as indicators of River Health.

I was surprised at how people responded to such an event - seeing the surprise in their eyes when we started to look a little closer through magnifying glasses at the water bugs (a whole new world for most), and the interest in how each individual species can represent its own place in an aquatic ecosystem.

We found a variety of interesting water bugs at all sites, including: Damselfly and Caddisfly larvae, Water Boatman, Backswimmers, Shrimps, tadpoles (though not truly a macroinvertebrate) and even a Yabbie or two! Waterwatch and Conservation Volunteers hope to continue this program and partnership over the 2011/12 summer holidays.

Hopefully we will see you there!!

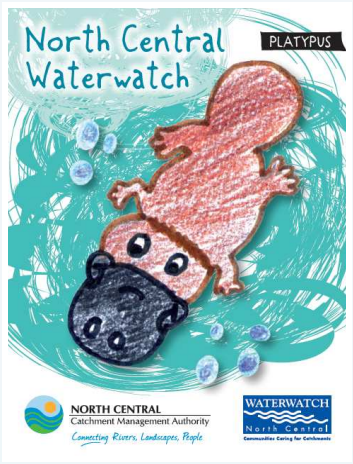
Volunteers look for creatures that lurk beneath the surface of our local urban wetlands (Photo courtesy of Cass Davis)

Seriously Sticky – Sticker Designs

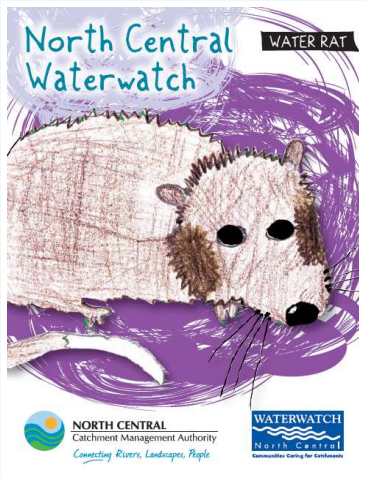
In the last edition of the Catchment Care Newsletter, we displayed the proud winning designs for the new Waterwatch stickers.

I thought I would provide the final sticker designs for you all to see - though I am sure it won't be long before you see the new stickers around your house or stuck to all sorts of things like school books, t-shirts, windows, fridges and car bumpers – pretty much everywhere!!

If you remember Maddy, 12, designed the winning Platypus:



Lilly, 10, designed this wonderful Water Rat:



Waterwatch at Schools

Waterwatch considers the River Detectives program to be a major component of Waterwatch. Therefore the program will be assessed throughout the 2011 period as it continues to complement North Central CMA projects. The River Detectives program strives to increase the adoption of sustainable living practice/behaviours with students, increase knowledge of rivers and wetlands, and raise awareness of factors impacting on their health.

Kelly Dunn has joined Waterwatch as a part-time employee to review our River Detectives program to ensure that it aligns with the National curriculum for primary school education. Kelly will be the main contact for the River Detectives, and you can contact Kelly on: kelly.dunn@nccma.vic.gov.au

River Detectives from Welton Primary School check the water quality at their site located on the Murray River (Photo courtesy of Jan Meakes Welton Primary School)

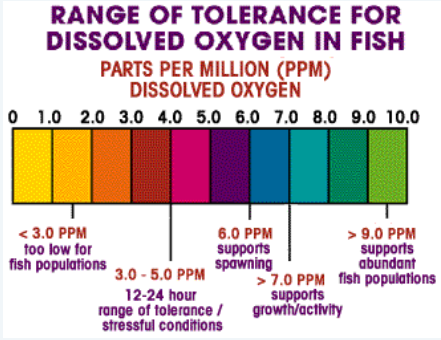
Avoca River – Water Quality

I had the opportunity to head out and about for a day on the 10 February; my mission - to collect water quality data, in particular dissolved oxygen, for the Department of Primary Industries (DPI) Fisheries Department.

After recent flooding in the Avoca River catchment, the DPI where reluctant to release fish after fears the water quality may not sustain the fish released into the system. I travelled along the Avoca River to visit three sites: Natte Yallock, Coonooer Bridge and Charlton.

Why monitor dissolved oxygen prior to a release of fish?

Low dissolved oxygen (DO) levels can lead to fish deaths. A level below 4mg/L of DO in the waterbody will likely cause stress, particularly in large-bodied fish (such as Murray Cod). When DO drops below 3mg/l, fish deaths may occur (though smaller-bodied fish can tolerate worse conditions, while other fish may find a suitable place such as a water hole, where conditions can sustain them until the water quality improves).



Source: www.water-research.net

Fish kills can also result from low levels of water in reservoirs or low flows in rivers and the consequent poor quality water, such as high temperatures, low dissolved oxygen or high nutrients.

Further to this, when rainfall events occur after a long period of dry weather, large amounts of organic matter (leaf litter, woody debris etc) are washed from the floodplain, river banks and dry river beds into the water, and can cause a black water event. This gives the water a dark, soupy appearance and an unpleasant, sewage-like smell. Oxygen levels in black water are often less than 1 ppm, and very few things can live in it. The low oxygen level is caused by the breakdown of organic matter.

Low oxygen may also result from the first rains after bushfires, the decay of a blue-green algal bloom, or as a result of pollution.

Story by Cass Davis and Phil Slesser
North Central Catchment Management Authority

Catchment Care Features

Water Weed of the Quarter

Lesser Reed-mace (*Typha latifolia*)
Family: Typhaceae

Photo: VicVeg Online

Other Similar Species: Narrow-leaf Cumbungi **(***Typha domingensis*); Broad-leaf Cumbungi (*Typha orientalis*). These are both native plants.

Growth Habit: like other *Typha* species, Lesser Reed-mace is a tall, perennial, reed-like, aquatic plant that can grow to 2 metres high with an extensive creeping root system.

Identification: Microscopic examination of the female flowers is required for authoritive identification of *Typha* species according to the Flora of Victoria. As a generalisation, Lesser Reed-mace has darker, chocolate-brown female flowers (the 'cat tail'); whereas female flowers of the native Cumbungis are cinnamon brown. Outside of the flowering period there are also some differences in foliage details that may help distinguish the species.

Flowers: The flowers of all the *Typha* species found in Victoria are extremely small and hundreds of thousands of them are organised into cylindrical heads on the flowering spikes, commonly called bull-rushes or cat-tails.

Fruit/Seed: Small spindle shaped seeds. Seed production has been estimated to be as high as 17 million seeds per square metre.

Dispersal: The spreading root system of Typha species allow existing colonies to expand each year. The seed has a feathery attachment which helps it to be carried by the wind and float on the water to new sites The seed is also carried to new places on the feet of animals and birds, and on earth moving or agricultural equipment. Once seeds find their way to the soil surface they will germinate if conditions are suitable, even a metre or so underwater!

Status: It appears water plant enthusiasts (biological vandals!) introduced Lesser Reed-mace. Now it is invading Victoria, but it doesn't appear to be as common yet as it is in northern Tasmania where it has infested many wetlands and dams. It also occurs in New South Wales. The Flora of Victoria only has records for east of a line between Melbourne and Echuca, but a recent small infestation in Castlemaine (now eliminated) shows that Western Victoria isn't immune.

Impact:
Like all invasive species, Lesser Reed Mace displaces indigenous species and degrades habitat quality
Control:
The Tasmanian DPIWE web site has recommendations for control techniques.

What can you do to help reduce the spread of this weed? Control any existing infestations on your property before flowering. Report any suspected infestations to DPI.

Story by Ian Higgins
Native Vegetation Coordinator
North Central Catchment Management Authority

What Frog am I?

I sometimes have a yellow, red or orange mid dorsal stripe.
As an adult, I am covered in large regularly shaped olive green blotches on my back.
I can be found in any form of litter near water.
In the northern region I have a short call with three to four distinct notes repeated in a long series of 'kuk-kuk-kuk'.

I am a S _ _ _ _ _ _ M _ _ _ _ F _ _ _

Creature Feature

Eastern Shrike-tit *Falcunculus frontatus*

The Eastern Shrike-tit is found along the coast of eastern Australia from the Atherton region, Queensland, to south-eastern South Australia. Its habitat is predominately in eucalypt forests and woodlands, forested gullies and along rivers in drier areas. It can also be found in rainforests. It is sometimes seen in parks and gardens, on farms with scattered trees, and in pine plantations.

Males of the species have an olive green back and rump, striking yellow under parts, with grey wings and tail. Females have a smaller head crest and an olive-green throat. Young birds have a pale throat and a brown back.

This native bird feeds mainly on insects, but will sometimes eat fruits and seeds. It forages in trees, and is often heard tearing at and probing bark for insects with its short strong bill. It is rarely found on or near the ground.

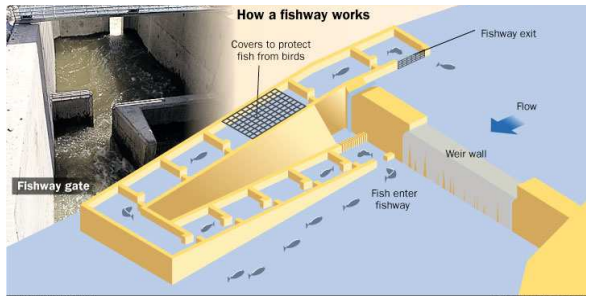
The Eastern Shrike-tit usually forages alone, in pairs or in groups of up to five birds, which are usually related.

Reference:
Higgins, P.J. and J.M. Peter (eds) 2002. *Handbook of Australian, New Zealand and Antarctic Birds, Volume 6: Pardalotes to Shrike-thrushes*. Oxford University Press, Melbourne.

North Central CMA Project

Loddon Stressed River Project – Following the Fish

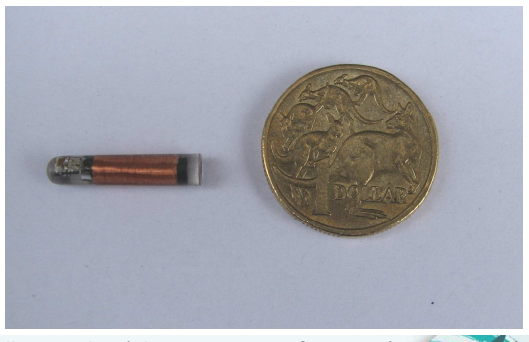
In 2008 the North Central CMA funded the construction of the Kerang Weir fishway. Previously the weir acted as an instream barrier, as fish were unable to pass through it. The Loddon Stressed River (LSR) team is very pleased with the installation of the vertical slot fishway and the 50km of additional fish passage it has opened up in the Loddon River system.



How a fish way works (Photo courtesy of the North Central CMA)

Since 2008, there has been a focus on monitoring the effectiveness of the Kerang Weir fishway and understanding its impacts on fish movements in the Lower Loddon. A monitoring program has been developed by the LSR team and with the help of the Dept of Sustainability and Environment (Arthur Rylah Institute) we are now conducting PIT or (Passive Integrated Transponder) tagging of fish species.

This monitoring process involves the insertion of a small microchip into the fish, much like the ones inserted into dogs and cats. Each microchip has a unique code, which when scanned with a PIT tag reader, identifies the fish.



A small microchip (Photo courtesy of Justin O'Connor, DSE)

Following the fish continues page 8

The PIT tagged fish are also fitted with a yellow tag on their dorsal fin which identifies them as part of the monitoring program – if you catch a fish with a tag it is recommended that you place the fish back into the water, so please keep an eye out for them if you're fishing!

PIT tagged Yellow belly fish (Photo courtesy of Tess Grieves North Central CMA)

PIT tag readers are currently planned to be installed in the Kerang Weir fishway. However, due to recent flooding events we have been unable to access the site. Installation of the fishway PIT tag reader will allow DSE and North Central CMA staff to understand fish movements such as: how much time the fish spend in the fishway; how often the same fish re-enters the fishway; and the regional migration of fish (PIT readers are also installed in the Murray River and Goulburn Broken fishways).

All the fish migration information will help determine the effectiveness of the Kerang Weir fishway and increase our understanding of fish movements in the Loddon river system. The data will also assist in guiding possible future installation of fishways in the Loddon River system. The Loddon Stressed River team is looking forward to having the PIT tag reader installed at Kerang and mapping the movements of native fish species in the Lower Loddon.

Story by Tess Grieves
Project Officer
Loddon Stressed Rivers Project
North Central Catchment Management Authority

Special Feature
Flooding in the North Central Region

My thoughts are with all of you who have been affected by recent floods events. The scale of this is far beyond what anyone could have ever imagined.

If there is anything I can do within my role as Waterwatch coordinator please let me know. A list (below) has been developed to help those who were affected by the floods:

Department of Human Services (DHS)
Visit the DHS website for information and resources that can help you get through the flood crisis. They have services available that can assist with issues such as health and wellbeing, financial and material assistance, and household matters.

Go to www.dhs.vic.gov.au for more information.

Emergency Grant
Individuals and families that have been affected by the flood are able to apply for an emergency grant of up to $1067 per household

The grant can provide temporary accommodation, clothing, food, personal requisites and one-off transport costs. The grant is 'needs based', is not means tested and is not affected by the insurance status of the applicant.

Contact a grants officer on 1300 165 413.

Re-establishment and temporary living grant
A temporary living and re-establishment grant is available to people whose principal place of residence has been made uninhabitable by floods. These grants are means tested.

Fact sheets are available at www.dhs.vic.gov.au.

Centrelink
A number of agencies are working collaboratively with Centrelink to provide support within communities in the recovery and disaster relief efforts following the January 2011 floods in Victoria, for more information on how you can receive support go to *www.centrelink.gov.au*

Rural Finance
The Clean-up and Restoration Grant: Up to $25,000 (made as a single payment), the grant is for primary producers, small businesses and not-for-profit organisations who have suffered direct damage as a result of the floods between August 2010 and January 2011 or damage caused by hail during November 2010 in Victoria. The grants can be used for clean-up, removal of debris, animal welfare and business restoration.

Further applications can be considered for subsequent flood events that have caused additional direct damage.

The grant is not intended to replace the need for insurance or to provide compensation for losses. Any grant for clean-up work subject to evidence that is subsequently covered by an insurance claim is to be repaid.

All claims for assistance are assessed on an individual basis and must be accompanied by 30 day invoices to support the expenditure claimed. Further information is provided in the fact sheets found on the Rural Finance website (www.ruralfinance.com.au).

Low interest loans of up to $200,000 are also available.

For further information and application forms contact Rural Finance on 03 5448 2600 or visit their website www.ruralfinance.com.au.

Other services
Other services that you can contact directly include:

Lifeline - 24 hour telephone service that offers confidential support and advice to deal with stress and personal challenges. Phone 131 114.

Mental Health Assistance Line - 24 hour telephone service to provide expert advice, information and referral on any mental health issue. Phone 1300 280 737.

Beyond blue - Information line that offers expert information on depression, how to recognise it, how to get help, how to help someone else and how to stay well. Phone 1300 224 636.

Further to this, if you live in or your sample site is in an area where there has been floods or high flows and you are wanting to get to your site to do your monthly testing, please be mindful of the risks involved, your SAFETY always comes first, if it is too dangerous please DO NOT conduct your Water Quality testing!!

A Message from our Sponsors

Coliban Water: Impacts of floods on Coliban Water services

Recent floods have been the largest on record in our region. As successive towns in the Campaspe and Loddon catchments were variously affected by heavy rainfall and floods, so too was our ability to provide water and wastewater services as raw water became polluted from many sources, water treatment plants were threatened, sewage treatment plant lagoons were inundated and water quality monitoring was limited owing to restricted access.

Impacts of floods continues page 10....

Our focus has been to restore supply and protect public health. By the end of January 2011 six towns had been issued with 'Boil Water' notices when drinking water became compromised. Coliban Water will distribute bottled water for drinking and cooking purposes to residents in these towns until the 'Boil Water' notices have been lifted.

Whilst services are returning back to normal it will still be a number of months before all infrastructure is repaired.

Updated information on our water and wastewater services in flood affected areas can be found on our website www.colliban.com.au or by calling our customer service number 1300 363 200

Bottled water distribution- Rochester

Rochester Water Treatment Plant

Story by Rob Krober
Education Officer
Coliban Water

What Frog am I?(Answer)

I am a Spotted Marsh Frog

Dorsal view (Lydia Fucsko/frogs.org.au)

For more information about the Spotted Marsh Frog or any other Frog there are some great Fact Sheets available on our Website: www.nccma.vic.gov.au, or you can call Cass Davis on 54401863

Partner Agencies

Coliban WATER ...for life

SHIRE OF CAMPASPE

Rochester Campaspe Water Services Committee

CITY OF GREATER BENDIGO

Landcare Victoria