

Catchment Connection



Summer 2009/10—Regional Update

Welcome back to another exciting year of Waterwatching!

My name is Cass Davis; we may have already met or spoken on the phone. I became a Waterwatch Volunteer three years ago when I commenced my studies at Bendigo Regional Institute of Tafe (BRIT) in Conservation and Land Management. Through the Waterwatch program I have developed a passion for Victoria's catchments and waterways.

I have really enjoyed the past few months at the North Central Catchment Management Authority (CMA). Since starting in December I have been involved in shadow testing the Index of Stream Condition (ISC) monitors, responding to volunteer request, updating the Waterwatch database and generating 45 individual water quality reports for 2009 monitors. I've enjoyed meeting volunteers and being involved in the River Detectives program.

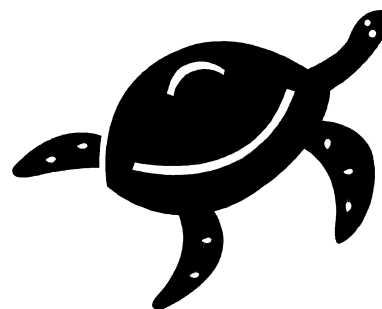
Former Waterwatch facilitator Nicole Bullen and I attended the annual Statewide Waterwatch Meeting in February. This was an opportunity to meet other Waterwatch staff and coordinators, and gather information about projects and events that are being run throughout the state. There was a discussion about the future of Waterwatch and we also talked about the important role Waterwatch plays within our catchments and communities. We discussed threats and opportunities to the program, including ways to educate and engage communities about the vital importance of our waterways. The database was reviewed and, as you may be aware, Waterwatch Victoria are currently designing a new database, which will enable Waterwatch monitors to directly enter into the system and can be accessed by the general public. This will allow monitors to obtain and compare data from other monitored sites within the catchment. While the Waterwatch program is currently being reviewed, we will continue to support you and your fantastic efforts in monitoring your sites.

On another note, Melanie Watts, who runs the frog program, is having a baby – CONGRATULATIONS MEL AND AARON! Mel will be on maternity leave from 1 June 2010 and the new project officer will continue to support Mel's monitors. For all you frog lovers no need to 'croak', I will continue to support and help you with your monitoring.

I am always happy to hear from Waterwatch volunteers and supporters and can be contacted on:

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Mobile: 0434 730 526
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Here's hoping for a wet and wonderful 2010!



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The River Detectives Program: *a review*

In mid 2009 the Federal Government announced a reduction in funding for the Waterwatch Program across all Catchment Management Authorities. This has resulted in a significant loss of support staff across the state. The North Central CMA is committed to the continuation of Waterwatch and has retained one full-time staff member to support the Program.

In 2009 a survey was completed by schools in North Central Victoria who participated in the 'River Detective Program' (RDP). Results from the survey indicated the value and success of the program was enhanced by the support of a Waterwatch facilitator who coordinated activities such as water quality sampling, Saltwatch Week and holding interactive sessions on water bugs.

Participating schools are committed to continuing the program, in particular the macroinvertebrate (water bug) monitoring activities. Student participation was very strong and they told us that the activities were their favourite part of the overall program.

Schools who did not participate in the RDP concluded timing of the program and other school commitments as the barrier for not enrolling or fully participating in the program.

The program will be reviewed at regular intervals to monitor its success, with a complete re-evaluation scheduled at the conclusion of 2010.



Upcoming events

Saltwatch Week

Saltwatch Week has been part of the North Central Waterwatch program since 1993. The North Central CMA considers Saltwatch Week to be a very important part of the Waterwatch program as it provides the community with an opportunity to learn about the effects of salinity and its impact on the environment.

Salt is usually something we would associate with meal times, as we put salt in food when we are cooking. Not only is it a food but salt can be found occurring in our soils, rivers and creeks. Salt is often found in the form of dissolved ions in water. This is a naturally occurring process resulting from the weathering of rocks.

We often talk about two types of salinity - dryland and irrigation. Dryland salinity is caused by the removal of deep rooted trees which causes the water table to rise, bringing salts to the surface. Irrigation salinity occurs as a result of large amounts of water applied to crops. Some of this water seeps through to the groundwater again causing the water table to rise. The effects of salt in our waterways include: reduction of land productivity; degradation to the natural environment impacting on native plants and wildlife; and reduction in water quality which affects aquatic life, reduces the supply of fresh quality water for stock and domestic use, and also increases treatment costs.

Want to be involved?

~ Contact waterwatch@nccma.vic.gov.au or cass.davis@nccma.vic.gov.au to let us know if you are interested in taking part in Saltwatch Week 2010.

~ Then, simply conduct your Waterwatch monthly testing between 3-16 May and send in your results.

~ We will enter your salinity results into Waterwatch Victoria's Saltwatch database.

~ You can view your results and hundreds of others at: www.vic.waterwatch.org.au

Quality Assurance and Quality Control: QA/QC Week

Over the years, many of you may have participated in the annual Waterwatch Victoria Quality Assurance and Quality Control (QA/QC) event.

Each year Waterwatch Victoria produces chemical "mystery samples" which are distributed to the regional Waterwatch programs during QA/QC Week. The mystery samples are standard solutions carefully prepared in a lab, with a certain pH level, electrical conductivity level, turbidity level and reactive phosphate concentration. The results of "mystery sample" tests can then be used to assess the accuracy of equipment used, monitor skills & testing methods.

During QA/QC Week, Waterwatch monitors from around the state are invited to have a go at testing the mystery samples as part of the regional data confidence process – this includes staff! Testing the "mystery samples" gives us a chance to check the quality of our equipment and the accuracy of our testing methods. This helps ensure that the data we are collecting is of a high standard giving us, and others, confidence in its accuracy and assurance that our data is of a usable, scientific quality.

The exact concentrations/levels of the "mystery samples" are kept under lock and key (only the Waterwatch Victoria staff know what they are) until all the results are received by Waterwatch Victoria. State and regional reports are then produced by Waterwatch Victoria and distributed to Regional Waterwatch Coordinators. We will then let you know how you went – and find out how we went ourselves!

To be involved contact waterwatch@nccma.vic.gov.au or cass.davis@nccma.vic.gov.au by 16 April 2010 so we can order our mystery samples. An event is being organised for July, and Waterwatch monitors will be contacted before this date!



Creature Feature

Brush-tailed Phascogale *Phascogale tapoatafa*

The Brush-tailed Phascogale also known as the Tuan is a small, nocturnal, arboreal, carnivorous marsupial. The Brush-tailed Phascogale can be identified by the uniform deep grey on its head, back and flanks, with pale cream underneath and large naked ears. Its tail is described as an intense black 'bottlebrush' up to 230mm long. The Brush-tailed Phascogale can grow to around 400mm in total length. The male can weigh up to 231g, while the female weight is around 156g. The Brush-tailed Phascogale can be found in a number of habitats but prefers open dry foothill forests, with an average annual rainfall of 500 – 2000mm.



The distribution in Victoria for the Brush-tailed Phascogale is considered to be fragmented

Its home range is thought to be around 30–60ha while the males can be greater than 100ha. The Brush-tailed Phascogale is thought to extend from the foothills to the north– east of Melbourne, Central Victoria around Ballarat, Bendigo and Heathcote, North Eastern Victoria from Broadford to Wodonga, the Brisbane Ranges north–east of Geelong, and far Western Victoria.

The Box–ironbark forest type widely utilised by the Brush-tailed Phascogale in south-eastern Australia has suffered a severe reduction in range and in habitat quality where it remains. Sixty-six per cent of the community has been cleared in Victoria, and of that which remains only 20 per cent is in conservation reserves. Cats and foxes are a threat to the Brush-tailed Phascogale.

Males all die after mating, while females die shortly after weaning their young

This breeding strategy makes the species vulnerable to local extinction; therefore the Tuan has been listed as threatened in accordance with Section 10 of the *Flora and Fauna Guarantee Act 1988*.

The Brush-tailed Phascogale's diet consists largely of invertebrates which include cockroaches, beetles, bull ants, spiders and centipedes. They have also been known to be a predator of small vertebrates and, given the opportunity, domestic poultry. Nectar plays an important role in their diet. Flowering eucalypts, particularly boxes and ironbarks, provide a bountiful resource, and in the right season the Brush-tailed Phascogale assists in the pollination of trees.

What is being done?

Senior Biodiversity Officer Peter Johnson, of the Department of Sustainability and Environment (DSE), coordinates ongoing monitoring of the Tuans, as part of a ten year project, in partnership with Deakin University, operating in four different regions of the state – Benalla, Ballarat, Kinglake and Bendigo. At the end of March 2010 Peter will be monitoring areas of the Kimbolton Forest. Peter will erect, check and pull down 80 traps over four nights. In previous studies, Peter has found up to 5-6 Tuans in similar survey conditions. Deakin University is currently analysing the last ten years of data, analysing tissue samples for genetic DNA comparison between Tuan populations. For further information contact Peter on (03) 5430 4358 or Mobile 0409 793 364.



World Wetlands Day 2010 at Reedy Lakes

World Wetlands Day was celebrated at Reedy Lake Ibis Rookery this year to promote the beginning of the Kerang Ramsar Wetlands Enhancement project. The project is being undertaken by North Central CMA in partnership with a range of other government agencies. The focus of the day was on Indigenous Cultural Heritage and bird watching. Around 50 community members attended the event, some travelling all the way from South Australia to be there!

Wayne Webster gave the Welcome to Country and performed an Indigenous 'smoking ceremony' to start off the days activities. Trent Gibson gave a quick presentation on the North Central CMA's project and what we are planning to achieve, before we headed off on a leisurely stroll along the cultural trail. Wayne spoke about the many Indigenous Cultural Heritage sites along the trail, how they were formed and what they signified. An hour later we were exploring the abundant birdlife from the famous two story Ibis Rookery bird hide with local bird enthusiast Simon Starr. To finish off the day we had a big lunch together, relaxed in the shade and explored the underwater world (aquatic bug) display in the Waterwatch trailer.

An enjoyable day was had by all. If you weren't able to make it to the event I would highly recommend a day trip to the Reedy Lakes – the cultural trail is marked and easy to navigate, and the bird hide has plenty of posters to help you identify the birdlife that will keep you entertained for hours.

Mel Watts



Smoking Ceremony



Wayne Webster points out Indigenous cultural heritage sites along the trail



Simon Starr discusses birdlife of the Reedy Lakes and their habitat requirements



Pest Plant and Animal (PPA) workshops

Two PPA workshops were held recently as part of the Kerang Ramsar Wetlands Enhancement project and the Gunbower Ramsar Site Enhancement project. This year's target areas for the Kerang Ramsar Wetlands project are the Avoca Marshes and the Reedy Lakes system. For the Gunbower Ramsar Site Enhancement project we are targeting Gunbower Forest and associated bodies of water, and along Gunbower Creek.

We were very pleased with the turnout at the workshops with 38 and 28 people attending the Kerang and Cohuna events respectively. Those that attended provided very valuable information that will be used in this year's project, and into the future.

The focus of these workshops was to gather local information from the community on topics such as weeds, particularly Weeds of National Significance (WoNS), rabbits and foxes. This was done through a series of short presentations followed by a mapping exercise. The mapping exercise involved getting attendees to identify areas of known 'hot spots' for target weed species, rabbits and foxes on large maps of the project areas. Considering the large distances that foxes can cover and the impact that they can have on native fauna we also gathered information on turtle and bird breeding (particularly those that nest on the ground) areas.

Mel Watts



Marking rabbits, foxes and threatened species on the map – Cohuna workshop



Trent Gibson giving an overview of the project – Kerang workshop

Peppergreen Farm Festival

The Peppergreen Farm Sustainable Living Festival was held on 13 March 2010. The North Central Waterwatch team was invited along to join in the activities, and to engage with the community to help raise awareness about water quality and macroinvertebrates in the North Central region.

The Waterwatch trailer attracted over 500 people throughout the day, with people asking questions, searching for waterbugs and reading the water quality fact sheets on display.

The interaction by children was very fascinating with some youngsters staying at the trailer for hours. Parents were fascinated by the trailer, and some even got into searching for bugs themselves!

The Waterwatch team - completely unaware - were voted by community participants to be the most sustainable and informative/interactive site at the festival (we won a big bag of locally grown veggies... YUM!).



Hamish finding Water Bugs at the Peppergreen Farm Sustainable Living Festival



Campaspe River Dreaming

For the past six years a section of a rusty iron ladder laying across a log on the Campaspe River has been a useful depth gauge for a couple of Waterwatchers at Strathallan.

The ladder was probably attached to a grain silo on a nearby property once a productive dairy farm. The signs of its former life are all there – small channels which once criss-crossed, and flood irrigated the paddocks, have been disused and dry for years. The remains of fences and gates, evidence that someone in the past worked hard to set up the farm, are now broken down and wireless and homemade gates hang off rotten corner posts.

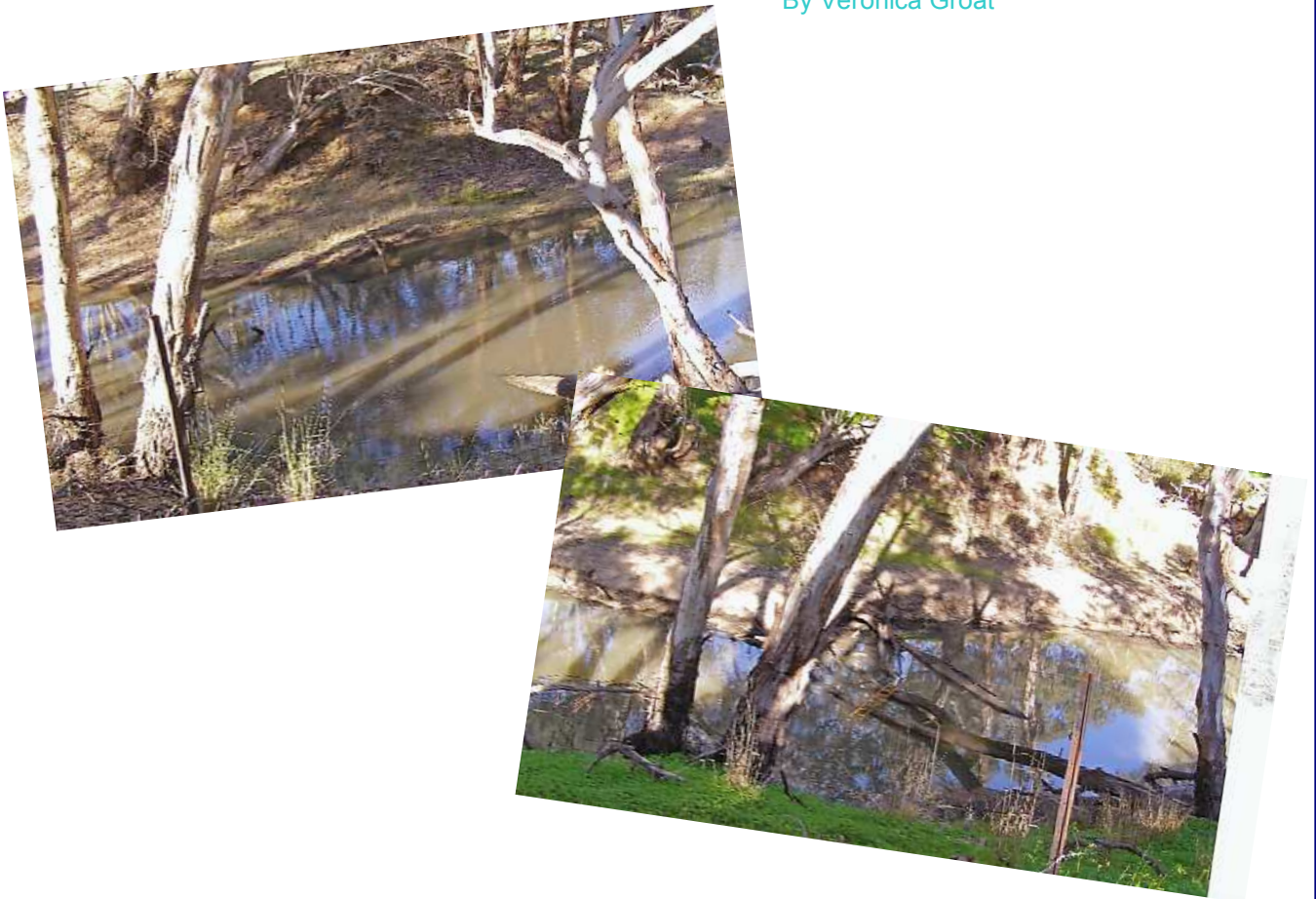
Nowadays the farm runs a raggedy group of about 40 cows and calves, all colours and denominations represented. They look for feed most of the year, nosing around Briar rose and African Box Thorn bushes and patches of Paterson's Curse, Scotch Thistle, Bindii and Bathurst Burr.

Just like the farm, the river has seen better days. The steep, deep banks tell a story of a once vibrant, busy and bountiful waterway. While River Red Gums still line the banks, roots are exposed and limbs and branches fall carelessly across the water and now oxalis has taken over the undergrowth providing yellow patches of inedible vegetation on both sides of the river.

For the past six years, of an acknowledged 11-year drought, water in the river has generally been low. Occasional environmental flows and water transfers have given the river a much needed breath of life and provided a resurgence of plant and macrobiotic life, giving Waterwatchers a reason to smile and cheer.

Through all this time the rusty old ladder has soldiered on, fulfilling its role as a hard-working depth gauge. On the few occasions when the ladder disappeared underwater, resounding cheers could be heard back to the Northern Highway... and while a partially submerged ladder attracts a happy head nod, for the rest of the time as the ladder sits out on the log, high and dry there is absolutely no response.

By Veronica Groat



Froggies...where have you gone?

It has been a bit quiet on the frog front over the past couple of months, due to the summer heat. Despite the few showers and thunderstorms it is still pretty dry out there – thanks especially to the windy conditions of late. My dam, which supported Perons Tree Frogs, Eastern Common Froglets, Plains Froglets and Spadefooted Toads, is now completely dry and there hasn't been a croak from the Avoca River (at Coonooer Bridge) for some time. Even the most common frogs are saving up their voices for a rainy day!

In other areas, however, there have been some successes. Dani Ruedin, a superstar frog monitor of ours, has been out and about at the Bendigo Treatment Plant in search of Growling Grass Frogs and has been successful on a number of occasions. Dani has been helping out Coliban Water by undertaking frog surveying to determine the current extent and locations of this species. A great effort Dani, thank you!

With the exception of the Growling Grass Frogs, all of our other frog species aren't big fans of the warmer weather and are hiding out until the cooler weather returns. When things heat up on the surface those with the ability to seek shelter and moisture will venture into the ground. Many of you may have discovered their hiding places when you were out digging in the garden! The Spadefooted Toad is particularly good at this as it has well-developed hind legs and toes to aid digging. Others that aren't so fortunate will hide underneath leaf litter, or crawl down between cracks in the ground. Now is a great time to start listening for the Bibrons Toadlet– they are croaking out in Tarnagulla right now– so get the recorders out!

Mel Watts

But don't worry, they will return when they are good and ready!



FROGS FROGS FROGS

Now that Mel has informed us all of where the frogs go when it is dry, we have had copious amounts of rainfall since and I have at least four different frogs growling, bonking and croaking away in my back yard! It is beautiful to sit back with a cuppa at night and listen to the spectacle of frogs singing away!

My list to date:

Pobblebonk- *Lymnodynastes dumerilli*

Spotted Marsh Frog- *Lymnodynastes tasmaniensis*

Eastern Common Froglet- *Crinia signifera*

And possibly Peron's Tree Frog- *Litoria peroni*

Have you heard any in your backyard?

If you send me the details of your frogs we can write a list for the next Catchment Connection. Send your froggy details to cass.davis@nccma.vic.gov.au.

LETS SEE HOW MANY FROGS WE CAN HEAR IN OUR CATCHMENT!!



What Bug am I?

I have large compound eyes and three long tails (cerci);

I sometimes have leaf-like gills along my abdomen;

I am very sensitive to low levels of oxygen and chemical pollution in the water;

I prefer cooler shady spots in the water, under stones in fast flowing water or among plants in slow flowing water;

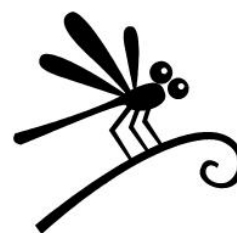
I have two pairs of wings; my front wing is larger than my hind wing;

It can take from three weeks to two years to become an adult. As an adult I am short lived, lasting only a matter of days (even hours);

I only eat plant matter or decaying materials;

I am a...

M_____ N_____



Waterwatch 2009 Index of Stream Condition (ISC) Project

In 2009 the Waterwatch Program was part of the Department of Sustainability and Environment's (DSE) ISC project. The DSE in conjunction with CMAs in 1999 and 2004 benchmarked the environmental condition of Victoria's major rivers and creeks using the ISC program. Program leaders at DSE recognise the value that Waterwatch data would contribute to the state-wide benchmark program in 2009, therefore partnering up with Waterwatch Victoria to obtain this quality data.

A total of 253 Waterwatch sites were sampled in Victoria throughout 2009, 54 of these sites were from the North Central region (that's 21 per cent) with 33 community volunteers actively involved. 12 sites were monitored in the Avoca catchment, 18 sites in the Campaspe catchment, and 24 sites in the Loddon catchment.

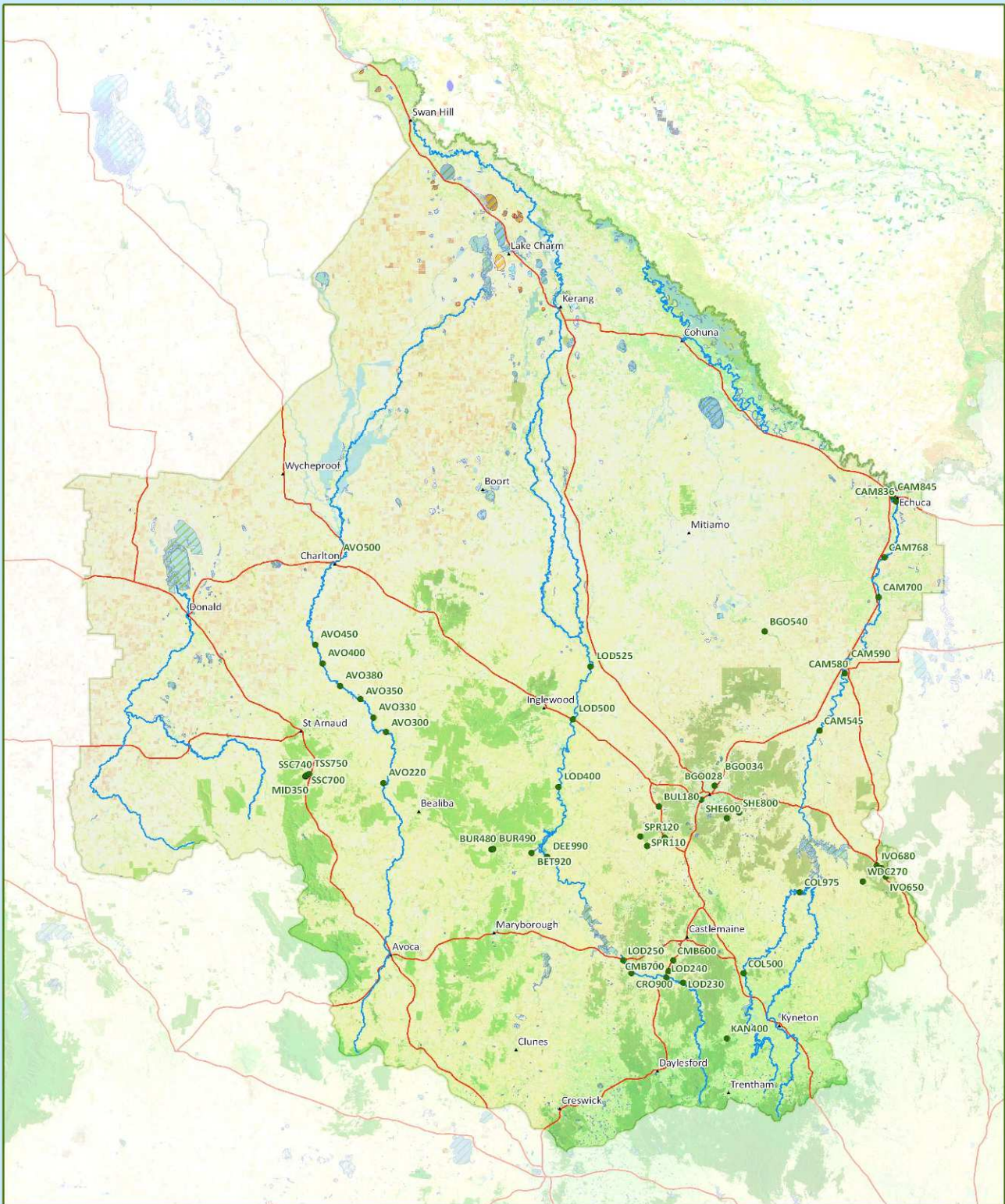
Four water quality parameters were measured: Electrical Conductivity (EC), pH, Turbidity and Total Phosphorus. At the end of the project those community monitors involved received a Waterwatch ISC project report which provided a visual representation of the data collected. However it was noted that a map highlighting the sites monitored would be of value to the community. Therefore I have attached a map of all the sites monitored for the 2009 ISC project (see map on page 10). Your ISC site is highlighted by a green dot and your site code.

Again a big thank you to all monitors who took part in this activity - this is a great contribution to information needed for future management of our rivers and creeks!



If you would like a copy of the North Central Waterwatch report please feel free to contact us!



Your Index of Stream Condition sites for 2009



Legend	
● Waterwatch_ISC_Sites	Wetland 1994
■ North Central CMA	Deep marsh
— Main_Watercourses	Open water
— Main Roads	Meadow
▨ Sewerage pond	Shallow marsh
▨ Semi saline	Permanent saline



NORTH CENTRAL
 Catchment Non-point Source Authority
 Connecting Rivers, Landscapes, People

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Water Weed of the quarter

Parrots feather

Myriophyllum aquaticum

Alternative Name: Brazilian Water Milfoil

Family: Haloragaceae

Origin: Native of South America

Flowers/Seed head: Male and female flowers produced on separate plants. Only female plants found in Australia. Flowers have four triangular white sepals, 0.4–0.5mm long; petals absent.

Description: Perennial aquatic herb. Stems spreading and erect, hairless, to 5m long and to 5mm wide, rooting at lower nodes. Leaves hairless with blade of submerged leaves to 4cm long, emergent leaves 2.5–3.5cm long, 0.5–0.8cm wide, crowded towards tip.

Distinguishing features: Distinguished by all leaves in whorls; blue-green emergent leaves, toothed in whorls of 4–6; leaves with 18–36 teeth, lack of fruit (in Australia).

Dispersal: Spread by stem fragments, as seed is not produced in Australia.

Occurrence: Occurs in flowing and standing fresh to slightly brackish Water, streams, lakes, drains and canals, seasonal and permanent wetlands and persist on saturated soils.

Source: http://www.dpi.vic.gov.au/dpi/vro/vrosite.nsf/pages/weeds_aquatic_parrots_feather



Source: <http://www.weeds.org.au/cgi-bin/weedident.cgi?tpl=plant.tpl&ibra=all&card=W18>

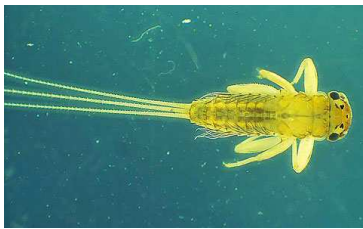


More Information and Partner Agencies

What Bug am I?

I am a...

MAYFLY NYMPH



North Central Waterwatch
c/o North Central CMA
Contact Cass Davis
t: (03) 5440 1863
m: 0434 730 526

waterwatch@nccma.vic.gov.au or
cass.davis@nccma.vic.gov.au

Photo of the Quarter



This photo was sent in by Naomi Blanchard after the big storms in early March 2010, she said this site and her other sites very quickly became overflowing!! Naomi and Jenny Somerville monitor five sites along the Bendigo Creek. Great Photo!!



CITY OF GREATER
BENDIGO



**Rochester Campaspe
Water Services Committee**



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Catchment Management Authority

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