

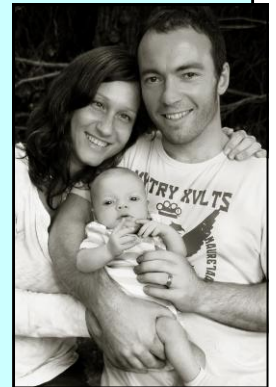
Catchment Connection



Regional wrap—Summer 07/08



Well...lots of things have happened since the last edition, so lets get you up to speed! Britt and Steve Gregory are the very proud parents of Jack Casey Gregory. Britt gave birth on December 20th, 2007 and I must admit he is one VERY handsome little fella! See the attached photos for proof!



Sadly our regional coordinator, Leigh Mitchell, moved on just over a month ago and has taken up a waterway planner position with Melbourne Water (back in the big smoke!). I'm sure you will all miss him as much as we do!

Important dates!

Bibrons Toadlet surveys—

March to June

Saltwatch Week—

4th-10th May

QA/QC Week—

21st-27th July

National Water Week—

19th-25th October

North Central Waterwatch and Community Stream Sampling Project update

Despite all the chaos, both the Waterwatch Program and Community Stream Sampling project continue to grow. We have had a busy few months with the start of the 2008 school year and the subsequent roll out of the River Detectives program, as well as running events for our community monitors. The frog monitoring and identification project has been very successful with confirmed recordings of the threatened Growling Grass Frog...but more about that later. More and more volunteers put up their hand to investigate water quality in their local streams and waterbodies as well as strategically selecting sites where works have been undertaken which is wonderful.



NORTH CENTRAL
Catchment Management Authority

Targeted frog surveys

North Central Waterwatch have administered two seasons of targeted **Growing Grass Frog** surveys so far. The latest season has just finished up and we are happy to announce that two confirmed populations of this species were found within the Bendigo Creek system...who would have thought! There have also been unconfirmed sightings of this species within the Loddon catchment- we will confirm this as soon as the film is developed!



Growing Grass Frog image copyright of Lydia Fucsko

Bibrons Toadlet targeted surveys have been held for one season thus far, but it is NOW time again to get out the recorders and try to locate more populations! We also wish to return to sites where they were identified last year and check if they are still calling. Last years finds had implications for how forested areas around Bendigo were managed. Scheduled burns were altered in response to the find of the threatened frog species, along with other fauna and flora species of significance. Exclusion zones were formed and prescribed burns were modified to avoid impacts on these populations. All information collected through the frog monitoring project is collated and passed onto DSE's biodiversity team who then sends it through to the Victorian Wildlife Atlas. Prior to implementing a burn all biodiversity and cultural heritage information held by DSE and other agencies is accessed to ensure that their actions are not going to cause irreversible effects.



Bibrons Toadlet image copyright of Lydia Fucsko

If you would like to be involved in the frog identification and monitoring program please contact your local Waterwatch facilitator.



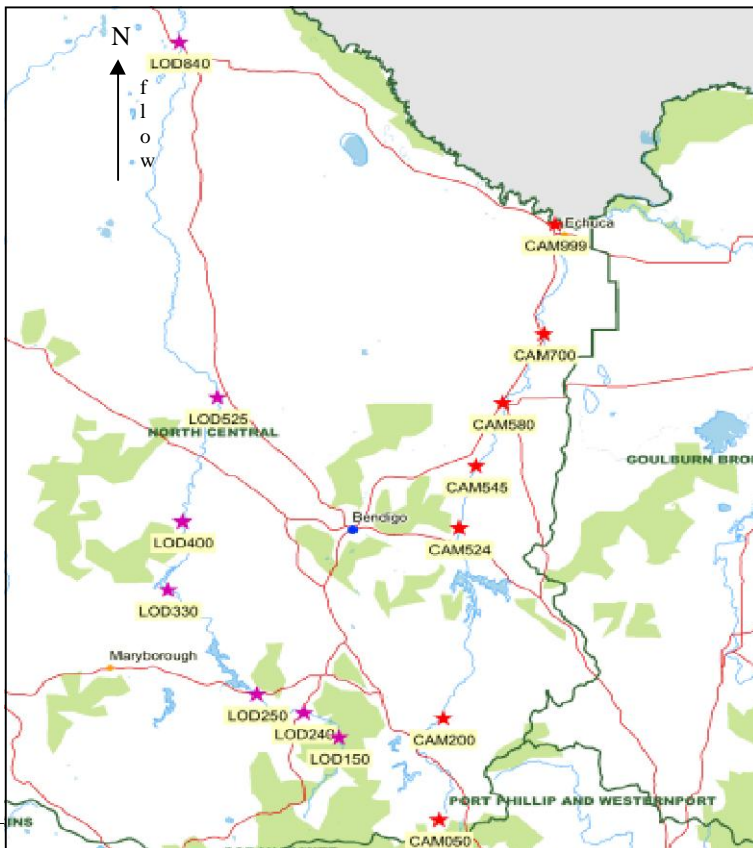
A River Runs Through It...

As a river travels along a landscape it accumulates sediments, salts and nutrients. Varying electrical conductivity (EC) levels can be the result of changes in geographical weathering, seepage of groundwater, industrial and agricultural effluent, rural runoff, stormwater runoff and sewage effluent, environmental watering and rainfall patterns. I thought it might be a neat idea to compare EC data from sites along the Campaspe and Loddon Rivers. Sites were chosen based on the amount of data available. Figure 1 shows monitoring site locations.

Electrical Conductivity (EC) measures the amount of dissolved ions such as calcium, sodium, chlorides (i.e. salts) present in the water. EC is measured with a digital meter that measures the flow of electricity between two electrodes. The more dissolved ions in the water, the faster the electrical current will travel. EC is measured in micro-Siemens per centimetre ($\mu\text{S}/\text{cm}$). State Environment Protection Policy (SEPP) objectives are:
Uplands ≤ 500 , Lowlands ≤ 1500

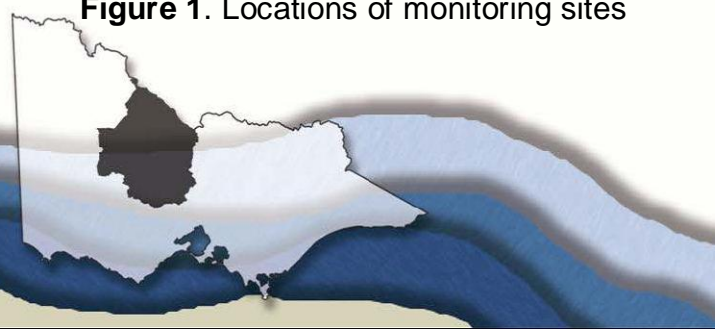
It is apparent in Graph 1 that salinity is not much of an issue in the upper reaches of the Loddon. Below Cairn Curran Reservoir, at site LOD330, the EC has risen significantly. This rise in salinity can be due to a number of factors. The first factor is that as the topography of the landscape changes and the river bed gets nearer to the water table, salt can begin to leach into the surface water. Another factor is the lack of rain that we've been experiencing. With evaporation rates remaining high and little to no fresh flows coming down the river, the salt concentration begins to rise. And as mentioned above, runoff can carry salts off the surrounding land and deposit it into the river, resulting in the salt concentration rising as

the river flows through the landscape. LOD525 has extensive data associated with it. You can see from the graph the decrease in EC during the winter months. LOD 840 is in Kerang where the water has been dammed up behind a weir.

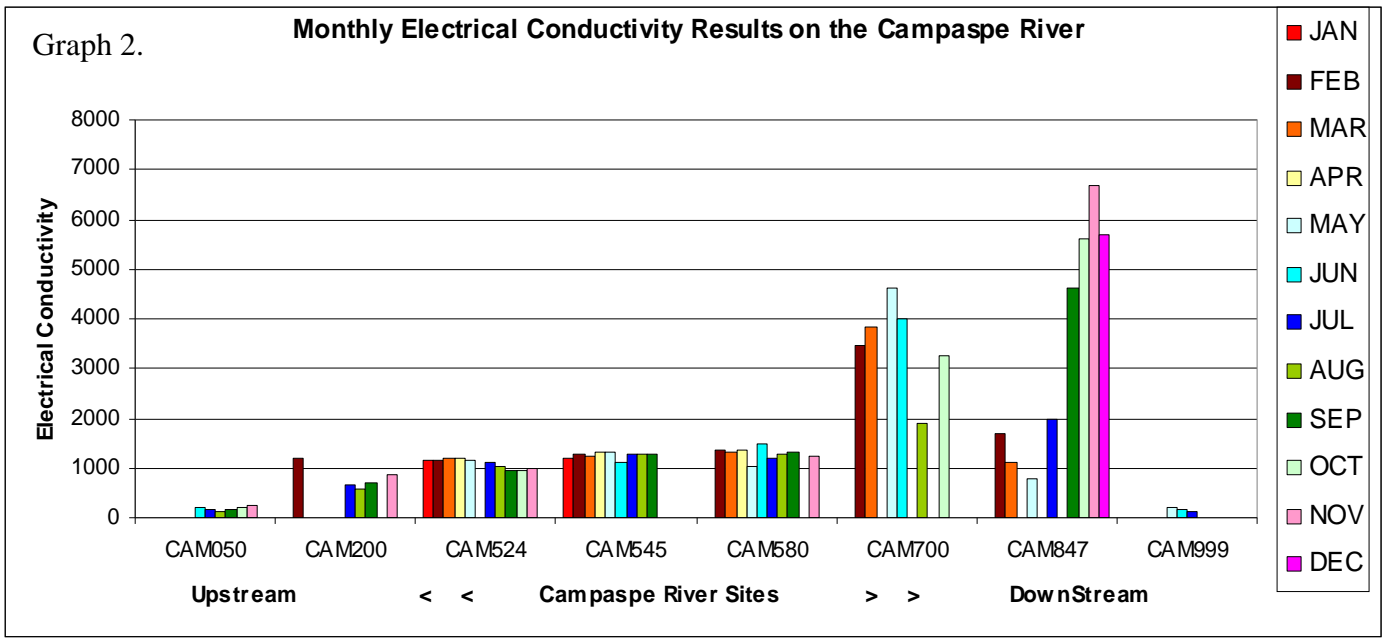
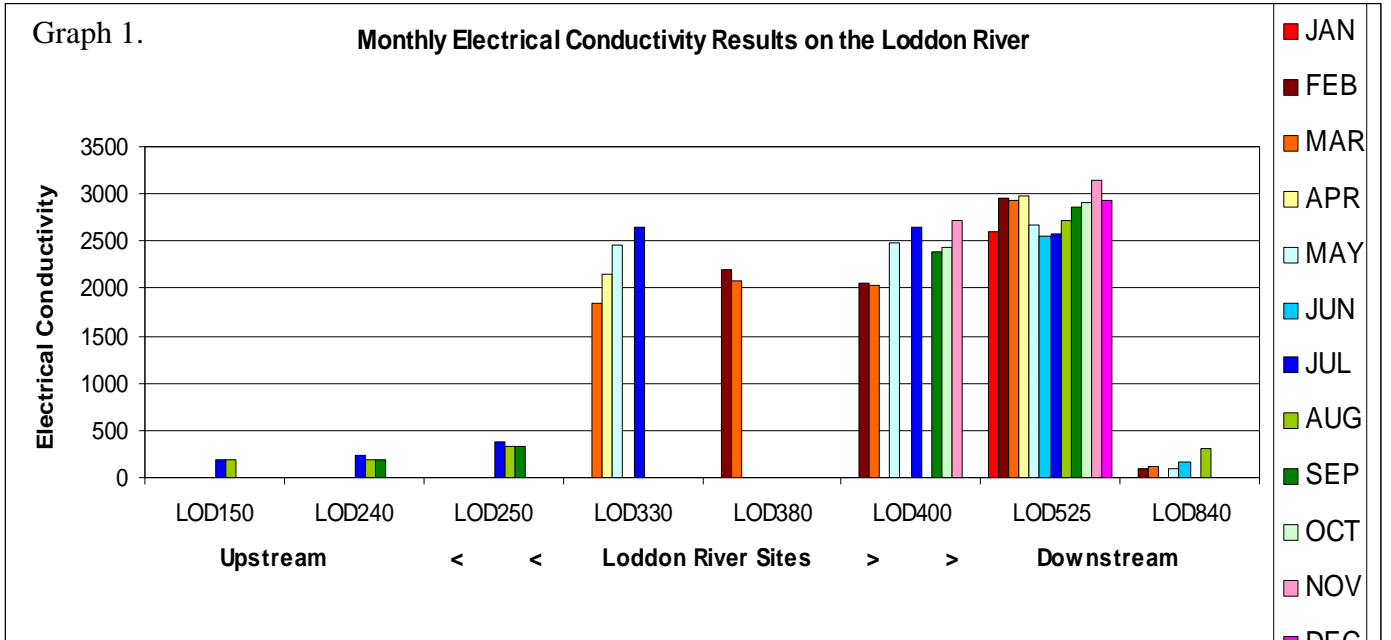


As with the Loddon River, the site at the beginning of the Campaspe River has low EC (Graph 2). The sites in the middle of the reach have a higher level and at CAM700 the levels start to rise significantly. CAM700 is in Rochester and is a large weir pool. Even with adequate amounts of water, the salt concentration is still quite high. CAM847 in Echuca (not displayed on the map) experiences high levels of salt accumulation. CAM999 is extremely low as it is situated at the Murray River/Campaspe junction. The water from the Murray River is extremely low in salinity due to the large volume of water it carries each day.

Figure 1. Locations of monitoring sites



It is extremely important not to forget that recent rainfall can affect EC levels as well as releases from reservoirs, so it may seem that there are unusual EC levels at some sites, but because of human intervention and good old mother nature, things are not always predictable!



Avoca/Avon-Richardson (...and a bit of the Loddon!) Get-together

On the 21st February, 2008 community monitors involved in the Waterwatch program and Community Stream Sampling project within the Avoca/Avon-Richardson catchments, and some of the Loddon, were invited to a social night...with just a bit of work required! The event included updates on the various programs; a regional wrap for 2007; kit servicing and meter calibration; discussion of 2007 salinity monitoring reports; the Avoca River DVD and claymation created by Natte Yallock PS were shown; and awards were distributed to monitors to recognise their hard work and achievements.

Awards recipients were:

- Rob Loats- **Waterwatch Warrior** award "I get knocked down but I get up again"
- Veronica Palmer- **Best 1st year**
- Stephen Walter- **Most consistent**
- Fred and Jan Watts, Glenda Watts, John and Jan Dods, Anne Hughes, Marion DaCosta- **Frog Fanatics**
- Aaron Watts- **5 years Waterwatch monitoring**

I must mention how proud I am of the wonderful network of volunteers in these areas. It is an absolute pleasure to work with such passionate and motivated people.

Thank you everyone!



Data use—Summer 07/08

Data collected by community monitors and schools, through the Waterwatch program and Community Stream Sampling Project, was used for the following purposes over Summer:

- Rob Loats reported the water quality status of his monitoring sites in the Buloke Times each month for the whole community to see.
- The NCCMA Environmental flows team continue to use the data collected on the Loddon River as part of their low flow monitoring program.
- Frog distribution data was forwarded to DSE and Parks Victoria to assist in effective environmental management.
- All data collected through the Community Stream Sampling Project was forwarded to the Bureau of Rural Sciences for incorporation into their on-line database.
- Murray Human Services in Echuca forward their data onto Echuca Landcare Group for publication in their newsletter.
- Monthly water quality data collected by Marion DaCosta and Fred Watts, along Burnt Creek and Pretty Jane Creek, is published in the Dunolly newsletter 'The Welcome Record'.
- DPI fisheries requested water quality information to determine appropriateness of fish stocking at sites on the Avoca River.
- Gunbower Creek steering committee accessed water quality data for Gunbower Creek.
- Water rat and platypus sighting results were sent off to the Australian Platypus Conservancy to assist with their program.

All data collected through the Waterwatch Program and Community Stream Sampling Project is entered into the regional Waterwatch database.

This data is available upon request— we are always happy to help!

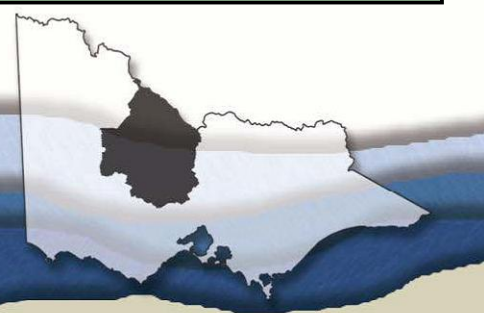
Contact the regional coordinator or your local facilitator for further information.

We need your data, even if there is no water!

Many waterways monitored by Waterwatch and Community Stream Sampling project volunteers in the North Central Region have not flowed for quite some time. While it is impossible to do water tests with no water, it's still **VERY** important for us to know that the waterbody is dry.

Please remember to send us your monthly results data sheet letting us know that there is no water— 'dry' or 'none' in the flow conditions section is sufficient.

This provides us with valuable flow (or lack of it!) data, but also helps ensure that the Waterwatch program will receive continued funding.



New Year Party a Success!

North Central Waterwatch held a (belated) New Year Party for its community volunteers in the Loddon/Campaspe dryland and irrigation areas on February 1, 2008 at the Lakeview hotel in Bendigo. The event was put on to show an appreciation of all the hard work current volunteers have been putting into their monitoring, and to welcome new volunteers.

The event was attended by about 50 people who enjoyed live music in the form of accordion, guitar and singing performed by Pam Connel and John Ross. For an entire hour, every song they played involved rain!

Congratulations **Ruth Penny** for over 10 years of valuable contributions to the North Central Waterwatch Program. Ruth will be receiving an official certificate from Victoria Waterwatch, and maybe a little something extra...



After a delicious gourmet barbeque and socializing, the regional manager for Greening Australia in Alice Springs, Peter Barker, gave an interesting and informative presentation about the issues faced by natural resource managers in central Australia, including the detrimental demand that feral camels place on the environmentally and culturally important local water sources. Peter stressed the important role of volunteers, like those in Waterwatch, in determining the success of conservation projects.

Overall, a good time was had by all. How could you not have fun with so many Waterwatchers around!



PLATYPUS AND THE DROUGHT: HOW TO ASSIST A STRANDED ANIMAL

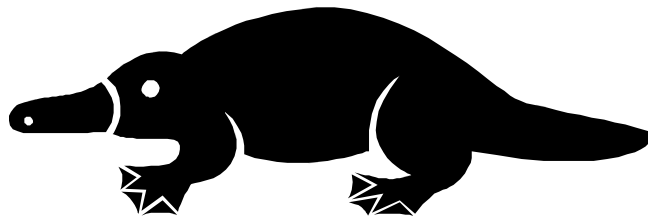
By Melody Serena, Australian Platypus Conservancy

The Platypus Conservancy has received many calls in the last few weeks from landowners concerned about the welfare of platypus living in shrinking pools. Sadly, there's no easy answer to the question: "What's the best way to assist the animals' survival?"

Platypus can walk, and so in theory can leave an isolated pool and head off in search of a better place to live. However, their chance of success will depend on the distance to the nearest reliable surface water—platypus can only feed in the water, and when walking across land are vulnerable to heat exhaustion and predators. Accordingly, many platypus will end up dying if forced to travel a long way on foot (say, more than a few hundred metres along a dry creek or river bed).

Persons who are worried that a platypus living in a small pool may be running out of food can try supplementing the animal's diet until flows resume. However, it should be kept in mind that platypus do need to eat a lot relative to their body size. Based on studies in captivity, each animal needs to consume at least 10% of its body weight each day to avoid starving to death, with animals typically weighing 800-1400 grams (females) or 1200-2400 grams (males).

So, if people really mean to get serious about helping a platypus in this manner, they should plan to provide at least a couple of large handfuls of food a day. Platypus normally feed on live invertebrates (mainly insect larvae, but also worms, yabbies, freshwater shrimps and snails, etc.) – their ability to feed on larger prey such as fish is limited by the fact that they don't have proper teeth. In practice, the best source of food may be worms collected from compost piles, though it might also be appropriate to try snails or even live fish bait purchased from fishing shops. The food can either be left in small piles near the edge of the pool in the evening (ideally in water that is at least 20 cm deep) or tossed into the water when the animal becomes active (or at dusk).



If a platypus is found a long way from water or in a remnant puddle, the best strategy is to take the animal immediately to the nearest stretch of extensive permanent water so it can start to feed. However, it's important to TAKE GREAT CARE when picking a platypus up, as adult males have a sharp, poisonous spur on the inner ankle of each hind leg. The safest way to hold a platypus is by firmly grasping the end half of the tail, which is beyond the reach of the spurs. Once a platypus is in hand, it should be placed immediately inside a hessian sack, pillow case or the equivalent (knotting the top firmly with twine to make sure the animal stays inside) which can then be placed inside a cardboard box to keep the animal safely confined during transport. Because platypus are highly vulnerable to heat stress, it is also essential that an animal not be allowed to overheat—for instance, by ensuring it remains in the shade, especially on warm days.

For more information on this or other platypus-related conservation topics, try visiting the Conservancy's web-site (www.platypus.asn.au) or contact us directly (phone 5157 5568 or email platypus.apc@westnet.com.au).



Platypus tracks between pools
[Photos Courtesy – Ron Cosgrave 2008]



Chewton landholder focused on salinity

Salinity has been in the forefront of Glenn Sutherland's mind since joining the Waterwatch Community Stream Sampling Project in mid-2007. An alpaca farmer and breeder in Chewton, Glenn "...wanted to know whether or not salinity was an issue on the property".



Glenn with a young alpaca

Additionally, Glenn hopes that the salinity data gathered will assist in "...filling in one piece of the jigsaw puzzle within a larger regional context".

Being passionate about his alpacas Glenn is keen to point out their environmental benefits such as – low water needs; more efficient converters of food to energy; and are gentle on the land because of their padded feet.

Glenn has about eighty alpacas on his picturesque sixty acre property with a large dam and stream frontage along Wattle Creek. Dam water is used for irrigation of pasture and watering of the alpacas who consume about 7 litres on a hot day and about 3-5 litres on a mild day.

Typically, EC (Electrical Conductivity: a measure of the amount of dissolved ions i.e. salts) readings from the dam are about 200-300 EC, there is little information available on the salinity tolerance threshold for alpacas however it is safe to say at these levels salinity should not be an issue for them.

Glenn anticipates that by collecting consistent and reliable baseline salinity data he is able to compare changes over time which will greatly assist in early detection and intervention on his property.



Water quality monitoring after willow removal

After the removal of willows along their creek in late 2007, Tylden landholders Craig and Gill Gauder were interested in monitoring and evaluating the effectiveness of the program.

Initially, Craig and Gill were interested in gaining a better understanding of their creek in particular the flora and fauna. But soon it became apparent that by setting up a water quality monitoring site on their creek they could track changes thus building a clear picture over time.

The Gauder's felt that given the present degraded riparian vegetation and water quality, as well as the lack of historical data for the site it was perhaps a good time to gain some baseline data to allow comparisons.

Whilst the Gauder's expect that the data gathered will assist them in better managing resources on their property, they also anticipate that data collection will be valuable for any future research efforts.

With the willows now removed they plan on fencing and revegetating the site with a view to restoring habitat and biodiversity. Whilst this process may take some time the Gauder's are confident that they are moving in the right direction given their long term goal of restoring the site to as natural a condition as possible.

Given the lack of water in their creek at the moment, the water testing equipment is also useful for monitoring water quality in their dam with plans to stock their property in the future they are keen to monitor salinity and address any issues early on.



Gauder property after willow removal



Creative Corner

Turbidity tube challenge:

Can you think of a creative way to recycle or reuse a turbidity tube? Waterwatch have loads of old scratched turbidity tubes cluttering up our shed and we want **YOU** to come up with your most creative use for them! Would they make a good musical instrument? Could we play a game with them? The choice is totally up to you!

We will reward the most innovative idea with a fun prize!

Send your written or illustrated entries to: Melanie at PO Box 120 St Arnaud Vic 3478 by **Friday 30th May, 2008**. We will publish the winner in the next edition of Catchment Connection.

We have a WINNER!!!!

The winner of the create a poem or song competition is Katelin Whitfield! Katelin is in grade 5 at St Mary's Primary School in Inglewood. Congratulations!!!!

This was Katelin's entry:

Frogs vary greatly in colour and size,
fRogs are small tailless animals with bulging eyes.
some Other kinds of frogs are found on land,
froGs can also be found in sand.
frogS are cool and interesting, so find out all about them and know it all!!!

What am I???

I live enclosed in two valves called a carapace;

I have many legs and antenna which I used to propel myself around in the water;

I am a filter feeder;

The valves of my carapace fit well together and allow me to survive short-term drying;

My eggs are quite tolerant and can survive in dry sediments for several years;

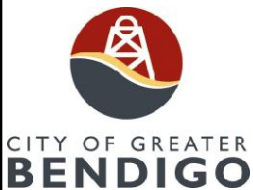
I am usually less than 2mm in size!!!!!!

I am a ____ shrimp!



PIC OF THE QUARTER

A big wave from the Waterwatch team!



Rochester Campaspe
Water Services Committee



Australian Government

Department of Agriculture, Fisheries and Forestry
Bureau of Rural Sciences
Department of the Environment and Heritage



action
Salinity & Water
AUSTRALIA

Waterwatch contacts

Acting Regional Coordinator

Melanie Barrot

Ph: 5440 1829

melanie.barrot@nccma.vic.gov.au

Loddon Campaspe (Dryland) Facilitator

Shane Thaddeus

Ph: 5440 1843

shane.thaddeus@nccma.vic.gov.au

Loddon Campaspe (Irrigation) Facilitator

Jennelle Carlier

Ph: 5440 1811

jennelle.carlier@nccma.vic.gov.au

Avoca/Avon Richardson Facilitator

Melanie Barrot

Ph: 0427 887 254

melanie.barrot@nccma.vic.gov.au

What am I?

I am a seed
shrimp (Class:
Ostracoda)



NORTH CENTRAL
Catchment Management Authority