

January in our Catchment

Here we are again! High summer, no water or no flow and all the problems that are associated with this time of year. The very real problem is that we have been in this state from almost this time last year. The Queanbeyan has been the one with at least a little flow, but now it is down to a trickle. The Molonglo has tried to flow after the little rain that we have had, but quickly lost impetus as the dry country soaked up all the water it could. Jerrabomberra Creek is in a very bad way, with some pools of water, but no continuous stream. Sullivans Creek, Yarralumla Creek and Weston Creek all flow after rain, but again the dry country has absorbed all the potential runoff. What is to be done!

I am working on the M-CHiP report for July–December 2009. If you still have results to send in, please do so as soon as you can.

Your results:

Quite a number of reports had either high water temperature and low dissolved oxygen levels, or low percentages for saturated oxygen content. In shallow water that implies that the water is not fit to live in at all, and in deeper waters that available oxygen will remain low in the heat of the day. The plague minnow (*Gambusia holbrooki*) happily tolerates these conditions, most native fish and macroinvertebrates do not.

Many reports had elevated EC readings. As water gets shallower dissolved minerals will be concentrated and so EC readings will remain high until we have more reliable flows. However, the Yarralumla Creek figure was four digits, rather more than expected!

There were high phosphate readings where Jerrabomberra Creek crosses Old Cooma Road, where the road-works continue on Woolshed Creek near Duntroon, on the Queanbeyan at 'Sunny Brae' and at the ANU. Most of the time, the vast proportion of the little available phosphate in the biosphere in our region is bound up in the living animals and plants, including us. The two most common causes of elevation in phosphates in waterways are wash-in of excess fertilizer and localised soil disturbance. The slightly elevated (0.05 mgL^{-1}) level of phosphate at Woolshed Creek is probably the result of the road-works, as the creek has no surface flow 100m above the Fairbairn Avenue bridge.

Unfortunately, it is difficult to do much about the EC until the drought breaks and water extraction in catchments is made more sustainable. But we can plan and implement measures to restore river bank and river margin vegetation and so increase natural shading along our waterways. This should encourage aquatic plants to grow and oxygenate the water, and provide habitat for water animals of all kinds. That is why we are interested in everyone doing Rapid Appraisal of Riparian Condition at their sites, and then letting their Landcare groups know what the situation is like. Plan now, planting times in the cooler months are short and not that far off!

A hint to keep your meters working well. The EC metre should be fine, it likes having dry points. If you haven't use the pH meter for a while, the bulb gets dry and may develop a very light film. Stand the meter in $\frac{1}{4}$ to $\frac{1}{2}$ a glass of water for ten minutes, and add one single drop

of vinegar. Switch the meter on after that; the pH of the tap water + vinegar should be about 5. Now, if you are about to use the meter you can go through the calibration procedure. If you can, put a small piece of wet tissue in the pH meter cap...it helps.

A weed to look out for in drying times:

Dense Waterweed (*Egeria densa*) is a thorough nuisance when it finds its way into waterways. It used to be sold as a cold water aquarium plant, as it is robust, grows quickly and easily and isn't eaten by goldfish. The crisp stems with their whorls of 4-5 curved leaves



have a refreshing green colour, and when it flowers the three petalled white flowers are held well above the water. But... this plant quickly fills the niche of the native pondweeds (*Potamogeton crispus* and *P. ocreatus*) or the stoneworts (*Chara* and *Nitella*) and continues to grow and grow until there is an impenetrable mat of dense green vegetation filling the pool. Not much except water snails can penetrate the thicket. Native fish don't eat it. Our caddis and beetles and damsel fly larvae prefer the local vegetation and want some dappled shade not

dense gloom! It will grow in flowing water but does best in sluggish river pools and still water. That is why it is a potential pest at times of low flow. Dense Waterweed is already proving a nuisance in the Queanbeyan above Dane Street.

And as for management...well, just don't let it get started. It is self-propagating through fragmentation. Removing it involves the hands-on removal of as much as possible and repeating the process again and again. And when it gets into weirs and ornamental lakes, don't mow it...that just helps it grow!

If you see this plant in our waterways report it to your council or to Parks Conservation and Lands.

Sites that need homes:

Last time I sent out a list of sites that need Waterwatchers. We would like you to ask your friends and acquaintances. Tell them about Waterwatch. Let them know that we do contribute to the care of our waterways. And let them know that an hour a month can help enormously, and that it is fun. I'll send the list round again...please pass it on!

Photo-points:

Although many sites may have little water at present, the surrounding riparian vegetation is

probably at its greenest in January and February. This is a good time to take your annual photo-point pictures.

Ideally you should have a permanent marker at the site that you can stand on or at and take the four shots. We do have a suitable short peg for your use, and you can pick them up from the office, or at the next QA/QC.

To take the pictures:

- Stand at the designated spot;
- Take a shot across the waterway at that point;
- Take a second shot, looking downstream from that point;
- Take the third shot up the bank from the spot; and
- Take the fourth shot looking upstream from the spot.

Label the images with locality, which aspect your image represents, the date and the photographer. If these are digital images, after suitable compression, email all four shots to me and we will include them on your data page. If the pictures are 'hard copy' could we have the second copy, and we will process it to fit into your data page in 'monitoring results' on the MCG webpages.

You may wish to follow up the photography by making comments about the changes at the site. You may also wish to take your photos along to your Landcare group and either congratulate them on the success of any restoration work, or to propose that you have a site in need of care.

Thank you all for your contributions,

Stephen Skinner

Waterwatch Coordinator, Molonglo Catchment Group.