

# February 2012 in our Catchment

We have had a proper February! Coolish nights, warm to hot more or less cloudy days and some spectacular electrical storms to round off the day. The changeover to autumn has begun, especially for the deciduous trees that are distinctly day-length sensitive, as the turn of the day-length is around 5<sup>th</sup> or 6<sup>th</sup> February. Some of the eucalypts shed their bark around now; that too may be day-length related. Flow in most waterways is reliable this year, and the ground-water content of catchment soils is good.

## Your Results

With the pulses of nutrients and warm days with sunshine there were reports of conspicuous algae; the presence of green algae is encouraging although water-net in the drain-line at Telopea Park doesn't sound too pretty! At the *Reschs Creek* gate on the Rossi road, the blanket weed is taking the oxygen out of the system. There was very high turbidity in Reedy Ck, again. High electrical conductivity in some of the usual places, but not bad in Sullivans Creek, reflects the short flushes and more regular trickle of most creek-lines at this time of year. With the beginnings of work in the paddocks above Mitchell, Sullivans Creek had elevated phosphate readings all the way down. Despite moderate flow, there wasn't much oxygen saturation in the bottom of Sullivans Ck or in Norgrove Park. This may indicate higher than usual activity in the decomposer industry – fine as long as nitrogen levels don't become too elevated.

## Why we ask you to check ...

I know there are a number of tests that some of you don't do because we didn't ask you to do them when you first became a Waterwatcher, and ones that some of you don't do because they don't appear to show anything. That's fine, but ...

We ask you to check **Dissolved Oxygen** levels in the full knowledge that spot checks of DO are not wonderfully reliable. However the acute health of your waterway for living things at the hour that you sampled can, especially when viewed across several months, give an indication of the chronic health of the site.

Oxygen saturation over 120% or below 90% on a warm afternoon before a thunderstorm may make life for the fish and the macroinvertebrates in your waterway unpleasant for a couple of hours ... but won't usually result in a fish-kill. However, if each month you report less than 60% saturation, even with some flow, there is an indication that the life in the waterway is under real stress, and the water chemistry is in reducing mode (so nutrients are in a less palatable state for plants and animals).

The DO kit is a little more difficult to use than the 'switch-on-and-read' instruments, but it is safe if handled sensibly and the mini-titration has a very distinct endpoint ... from rich blue to 'bright clear'.

We ask you to check the **Nitrate/nitrite** levels with coarse dipstick test so that if there is a sudden influx of human or animal waste we will have records of where it was first encountered. You are the ears and eyes of the local government and territory government in the waterways and pond ... they only test a few places, monthly or less frequently. So we are in fact delighted when you report 0.00 NO<sub>3</sub>! Keep waving the sticks in the water!

We ask you to check the **available Phosphate** for two important pieces of information:

- has there been some erosion or soil disturbance above your sample point?

- and especially when there is low flow in the waterway, are the conditions present for cyanobacterial blooms?

The end point in the phosphate kit can be difficult to pick when phosphorous levels are tiny, but the colour development is clear above 0.05 mg.L<sup>-1</sup>.

We ask you to check the **Conspicuous Algae** because how much or how little, and roughly what sort give a rapid check of the vitality of both the waterway and its bank vegetation. If you sample at a site with little or no shading and a rather plain base to the waterway you would expect ‘algae’ much of the time! Where the waterway has moderate to well developed bank vegetation (even of ‘foreign



extraction’) and the floor of the waterway has some structural complexity you would expect algae to be conspicuous only in spring, and then not for long. The shrubless edges of the pond in Eddison Park, Phillip, provide the sunlight that encourages blanket-weed to fill the shallow channel.

Please report both the **abundance** and the **form**. The records for abundance from the Ginninderra catchment are numerous

and go back a long way, but are of little use, as the simple distinction between apple green tufts (usually indicates good health), silkweed (moderate health) or blanket-weed (poor health) isn’t able to be made. None of the conspicuous algae we usually get will do you harm to feel and smell!

## The Calendar

Friday 16<sup>th</sup> March: rescheduled World Wetland Day BBQ at Dickson Wetland, Hawdon St Dickson

Weekend 17<sup>th</sup>/18<sup>th</sup> March: Water Quality Sampling Weekend for March

We will have a QA/QC day, in April, probably at Pine Island on the Murrumbidgee River.

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<sup>1</sup> The operation of the Molonglo Waterwatch program is assisted by the Australian Government’s Caring for our Country and the ACT Government.