

## November 2010 in Our Catchment

That was another useful drop of rain! Googong Reservoir is very close to capacity, and water is continuing to be released down the Queanbeyan. Hopefully, they will soon finish the spillway. River banks are showing sedges and rushes not seen for years. The shrubs and climbers are magnificent. What a pleasant season!

### Your Results

Only so few days and the 'flood and dry' creeks are back to being pools and dry runs. That is the nature of our waterways! The Jerrabomberra Ck reports illustrate this quite well...at Royalla things are fine, and they are not bad in Little Burra, but at Fernleigh Park there is some colour in the water. I'm not sure what is happening in Jerrabomberra itself, but the state of Lake Jerrabomberra is not wonderful (read on, below). The Sullivans Creek sites are, as usual, providing all sorts of reports. There may be some sort of chemical contamination at Mitchell, but things improve as you get to Flemington Pond. The Watson ponds, like many others, are showing extended spring algal flushes, and the phosphate problem continues at ANU. For the rest, things appear fine!

### What's Gone Wrong?

While there is plenty of flow in the rivers and creeks there has been little chance for algae of whatever kind to cause a nuisance. In our urban lakes, retention ponds and some farm dams the situation has been a little different!

Take, for instance, the drain line complex that leads to Lake Jerrabomberra and eventually Jerrabomberra Creek. There is a retention pond, Teatree Place Retention Pond, at the top of the west facing slope where Stockyard Creek once flowed. The water now goes underground, parallel to Coachwood Avenue, below Madew Park, and into Lake Jerrabomberra at Bayview Circuit. It is joined by the other drainage line to the east of the Tompsitt Drive roundabout, which, starting at Pemberton Place, makes Pipeline Reserve and John Palmer Park retention



ponds. This water also goes underground, below the school and into Madew Park. All the water then goes into the circular expanse of the artificial lake, and excess is allowed to enter Jerrabomberra Creek across the reserve. After the recent rains the Lake is full. Run-off throughout the catchment has carried plenty of fresh nutrients in, starting last February. The Lakeview Gardens side of the Lake is presently supporting a dramatic looking bloom of frothy mid-green blanket-weed. The waterfowl do not appear to be objecting greatly, but the other residents are not happy. At the same time, the Teatree Place Retention Pond has a bathtub ring of lemon yellow algal material.

### What has gone wrong?

**Nothing** really, the natural system has responded to a surfeit of nutrients in the best way it can.

The run-off collecting in Teatree Place has brought in nutrients that have encouraged the growth of some seasonal filamentous green algae, a species of *Oedogonium* and a species of *Zygnema*. Like every other native in our area they are having a particularly good spring. These are now in the process of spring (their equivalent of flowering) and the rafts of yellow green around the edge of the pond should disappear, until next year, in a couple of weeks. The local water bugs will enjoy the feast.

Further down the catchment, with nutrients being added from every lawn, flowerpot and veggie patch, at every culvert drain and stormwater sink, the ponds have an overload of nutrients. Just as all the grasses, native and imported, have gone wild this spring, so have the filamentous algae in the ponds. In Lake Jerrabomberra a usually well behaved local perennial green alga, *Cladophora globulina*, and a weedy (and possibly exotic) but rather interesting looking annual, *Hydrodictyon*



*reticulatum* or the Water

Net, have rapidly built up large populations. With plenty of sunshine trapping and sugar making, the algae have collected plenty of gas bubbles in their entangled filaments. The resulting rafts have been collected by the wind and the current and pushed under the bridge and into the western bay of the Lake. The water life, once again, will enjoy the fresh food, but we humans find the view less than pleasing.

Like weedy grasses, **these two**, or their rafts, will have to be **raked up and composted**. And perhaps in future, the water collected in the retention ponds could be used, without additional fertilizer, to keep the public areas of Jerrabomberra green. When it drains back in, it should be much lower in nutrients.

## Waterwatchers' Calendar

18<sup>th</sup>/19<sup>th</sup> December

Waterwatch Sampling weekend.

15<sup>th</sup>/16<sup>th</sup> January, 2011

Waterwatch Sampling weekend.

There will be a number of events for you to enjoy in the new year, including a macroinvertebrate day and another workshop about conspicuous algae, as well as a QA/QC. For those of you who couldn't make the evening at Kambah, I do have all three calibrating fluids in the office, and would encourage you to come in and replace old stock. If you are going away for summer holidays, please try to get in a sampling at some time in December, and on your return.

*Stephen Skinner*

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