

Dear Molonglo Catchment Waterwatchers

It was a very hot January – half a degree hotter on average than our previous record year in 2012 - so thank you for going out over the holiday period and collecting all that important data, so we capture what goes on in our waterways and catchments over a hot summer as well as in the cooler months.

### **In Our Catchment – January 2017**

Rainfall around the catchment was well below the long term average for Jan, although Hoskinstown had over half its average with 30mm for the month whilst Canberra airport had only 8.4mm.

Not surprisingly, some of the smaller creeks were not flowing in January, and more people sampled from pools because of very low or no flow. Apart from upper Jerrabomberra Creek, which is measured in the early morning, all sites were between 18 and 28 degrees, and some of the wetlands were over 30 degrees.

Lower Jerrabomberra Ck has the lowest measured pH in the catchment at 6, with all other sites measured at 6.5 to 8 apart from one dam in Watson. Electrical conductivity (EC) is typical or slightly lower for all sites. Turbidity was higher at some sites despite no rain and runoff, some with cause unknown, but notable sites were those on Weston Creek, Stony Creek (following extensive roadwork), Chimney Creek (there were sheep in the creek upstream), and the Molonglo River sites closest to Lake Burley Griffin, both up- and downstream of the Lake, with turbidity from 20 to 50 NTU.

Phosphorus (P) was very high in Weston Creek and lower Sullivans Creek again in Jan. Nitrates (N) were higher in Primrose Valley Ck (stock access this creek too) and still elevated in Barracks Ck but much reduced from the very high levels over Nov/Dec, as mentioned in my previous update [though they are very high again this month].

Finally, dissolved oxygen (DO) was very low at around half the sites in the catchment. This occurs with low flows and high temperatures, although as you may know the formula used to calculate the DO percent saturation takes temperature into account – warm water dissolves less oxygen than cold water.

### **Other News & Events**

#### **SURVEY ON WHY YOU ARE A WATERWATCH VOLUNTEER**

##### **Have your say!**

We'd love to learn more about the amazing volunteers who have contributed to the success of Waterwatch in the Upper Murrumbidgee and ACT ..... people like you!

The University of South Australia is conducting a research project to explore participation in citizen science, and Waterwatch has been invited to participate. We are excited to contribute to this important study and hope you can spare 5-10 minutes to help.

All you need to do is complete an online survey to help us understand our volunteers, which will help improve people's experience of volunteering in the future. The survey is anonymous and once completed, you can request a copy of the results. We greatly appreciate your help!

<https://www.research.net/r/participant-waterwatch-uppermurrumbidgee-molonglo>

#### **WETLANDS PHOTO COMPETITION FOR AGES 18 TO 25, OPEN UNTIL 2 MARCH**

The World Wetlands Day Photo Competition runs until 2 March 2017 for young people aged 18 to 25. The prize is a free flight to visit a Ramsar wetland anywhere in the world.

Details and requirements are at: <http://www.worldwetlandsday.org/photo-contest>.

Note that, to date, there has only been one entry from Australia. We are sure there are many other young photographers out there who could take some great photos of wetlands. Please let them know about this opportunity.

[This comes from Jenny Tomkins from the Wetlands Section, Commonwealth Environmental Water Office]

#### WORLD WETLANDS OPEN DAY AT JERRA WETLANDS

World Wetlands Open Day at Jerrabomberra Wetlands was great fun, and we met many interesting people and keen kids, some potential new volunteers, and caught up with all the fantastic people from ACT Parks & Conservation, the Firies (another big hit with the kids), National Parks Association, ACT Wildlife, SEE-Change etc etc. The Wetland walks, artworks and skilled artists, a baby bettong, European wasp info and nest, bicycle-powered smoothies etc were also great to experience. It really was an excellent day thanks to fantastic volunteer helpers, and all the incredible people who ran activities, stalls and exhibits, and the amazing Lori Gould from the Woodlands and Wetlands Trust (Jerra Wetlands) who organised it all.

Volunteers from Friends of Jerra Wetlands [my other hat] were incredibly helpful to Molonglo Catchment Group and Waterwatch, as well as helping with a whole gamut of Open Day tasks. Unofficial attendance figures for the day were about 1000 people, and many of them told us they had not visited the Wetlands before. It was a hot day, so the icecreams and Icon Water's cold water stations were very welcome.

Interestingly, for World Wetlands Open Day Woo sampled water bugs from Jerra Creek there and got a great range of bugs. They included mayfly nymphs, damselfly nymphs, water mites, tiny freshwater shrimps, and a selection of caddis larva including one with a box shaped case made from perfect, neat sections of reed stuck together with silk (rather like a box kite). As always, there were hordes of children and adults crowded around the bug trays all day, and Antia and Woo were kept very busy answering questions!

Jerra Creek has quite a stable temperature of around 25 degrees at this time of year, with water backed up from Lake Burley Griffin, and in-stream and bank vegetation (emergent and riparian) are improving so conditions for water bugs are pretty good, despite fairly poor water quality.

Platy and Ratty, the stuffed platypus and water rat were also a big hit, particularly with children and international visitors, and there must be quite a few selfies floating around featuring a stuffed platypus. People really do appreciate how special they are. Incidentally, one of our Waterwatch volunteers on the Queanbeyan River has an afternoon swim when it's hot and is lucky enough to see a platypus quite often.

#### MESSING UP THE RIPARIAN ZONE

I was reading about a workshop [Rivers of Carbon](#) held in Goulburn last year and I wanted to share some of it with you:

“Natural river systems are complex, ‘messy’ and retain water, nutrients and carbon. Modified river systems are simple, ‘neat’ and designed to keep water moving. These systems are carbon poor. It is estimated that modified river systems store less than 2% of the carbon they used to. (Professor Ellen Wohl, Australian Stream Mgt Conference 2016)”

Natural, “messy” rivers are also more biodiverse...

Matt Hering talked about “‘messier’ riparian zones [which] provide habitat for birds, reptiles, macro-invertebrates, fish, bats, and amazing plants. His talk was captivating with beautiful pictures of the animals and plants you only find in riparian areas. In the ‘simple, neat vegetation ... you would expect to find the following birds – Noisy Miner, Eastern Rosella, Magpie, Crested Pigeon, Pied Butcherbird. In the ‘complex,

messy vegetation you would find many more birds including – Red-capped Robin, Grey Fantail, Mistletoebird, Painted Honeyeater, Yellow Thornbill, Chestnut-rumped Thornbill, Western Gerygone, Eastern Rosella, Singing Honeyeater, Striped Honeyeater, Brown-headed Honeyeater, Rufous Whistler, Crested Shrike Tit and many more. Matt also talked about the importance of river and riparian areas as ‘hotspots’ for biodiversity and wildlife and vital for our native plants and animals to survive and thrive.”

Ian Rutherford said, “Rivers need ‘room to move’ so that they can perform a range of functions, providing habitat and food for a wide range of animals, as well as having a range of flows and movement. Disturbance and movement is really important for rivers, creeks and streams, as the beds of rivers need to ‘turn over’ so that the water is oxygenated, and pools and riffles are formed. Some fish only spawn in submerged trees and logs so we need these structures in our rivers for this to happen. Ian also talked about how when it floods we often blame the vegetation in rivers like reeds and trees for making those floods worse. Research has shown that in large floods, the impact of vegetation is very minor as the amount of water flowing through the river and out onto the floodplain ‘drowns out’ the shrubs, trees and reeds.”

These are all quotes taken from the story on the Rivers of Carbon website here:

<http://riversofcarbon.org.au/rivers-of-carbon-goulburn-district-river-linkages/a-great-roc-gig-in-goulburn-focusing-on-why-we-want-to-mess-up-the-riparian-zone/>

If you’d like to know more about this type of thing, you can subscribe to the Rivers of Carbon email newsletter via a link at the bottom of the webpage listed above.

Waterwatch does riparian assessments (using the Rapid Assessment of Riparian Condition (RARC) method) that look at riverside vegetation and habitat features and give each site a score which is converted to a condition description from Excellent, through Good, Fair and Poor, to Degraded. The RARC site scores are averaged to make up one third of the overall CHIP score (Catchment Health Indicator Program score) for each river reach. In a way, this is assessing the “messiness” of a river or creek.

---

I hope you will find time to do the survey on why you are a Waterwatcher. We love to support research into citizen science and it would be great if you could find a few minutes to help the Uni of South Australia understand more about our fantastic program, and the wonderful volunteers who take part (that means you!). I look forward to seeing the survey results in coming months.

Thanks as always for getting out into all those sites on our waterways to do your water quality testing and help us keep track of catchment health.

Deb Kellock

Waterwatch Coordinator, Molonglo Catchment Group

[waterwatch@molonglocatchment.org.au](mailto:waterwatch@molonglocatchment.org.au)

(02) 6299 2119

0439 411 325

I generally work Tues – Fri from approx. 10.30am – 4.30pm

The operation of the Molonglo Catchment Group is assisted by the Australian Government’s Caring for our Country and the ACT Government.