December 2015 / January 2016 in our Catchment.

Your Results

December rainfall ranged across the catchment from no rain at all to about 35mm, and was well below average again. However January rainfall was twice the average or more, with falls of over 100mm to 230mm which is wonderful for midsummer. Most of that rain fell immediately after the sampling weekend however. In many areas now the grass is green and lush and our bushfire risk has plummeted.

Flow was low at most sites in December, and some ephemeral creeks were dry again. It was still low or dry at many sites in January too, although localised storms impacted some sites such as upper Jerrabomberra Creek. Temperatures for December ranged from 16 to 27°C, and for January from 14 to 31°C, with time of day and flow always being the major determinants.

pH did not vary much except for one very high reading in upper Sullivan's Creek, where extended concrete contact time is the likely cause. Electrical conductivity (dissolved minerals) ranged from as low as 40 - 80 µs/cm in the upper catchment sites to 1850 on the middle site of Woolshed Creek, which is somewhat typical for this site in the summer months as a result of the hydrogeology and historical land clearing.

Turbidity was low at most sites over both December and January, with the few exceptions being a couple of urban wetlands and some localised disturbances in creeks. The cause of turbidity is not always apparent, however stock do have access to these creeks so they are a likely cause. Phosphorus and nitrates were low at almost all sites too, with some urban wetlands or sediment ponds, as well as lower Sullivan's Creek (high P only) being the only exceptions.

As usual at this time of year the urban "creeks" (mostly concrete drains) generally had very low dissolved oxygen levels, as well as the more ephemeral rural creeks.

Other News & Events

We'll be starting our autumn water bug "Bug Blitz" days soon. I hope many of you will be able to join us for a site or 3. And you can bring along anyone you like, including children. It's great fun, fascinating and there's lots to learn (or just observe). Whenever we attend an event such as a show or open day with our Waterwatch stall, the water bugs are always one of the most popular attractions for both kids and adults. There will be at least one Bug Blitz day held on a weekend, and I'll send a couple of dates to you soon.

New Freshwater Fish

"Did you hear that the Kimberley has now been recognized as the most significant region in the nation for freshwater fish diversity? A recent expedition found a whopping 20 species new to science, even though they've been known to local indigenous communities for eons. One 'grunter' is to be named after the WA author... Tim Winton":
www.abc.net.au/news/2016-01-04/new-fish-species-named-after-author-tim-winton/7066422

Incredible New Frog Species

One man has been instrumental in finding many new frog species in India, including a tiny night frog, and a chubby, purple frog with a pig like snout unlike any other frog, as well as the rediscovery of a species of bubble-nest frog not seen for 136 years. "In the last 15 years, Dr Biju - called the frog man of India and the frog fanatic, among other things - and his team of scientists have discovered 89 of India's 388 frog species. He reckons there are some 100 species which remain undiscovered - enough to keep him working for a while."

'India's maverick "frog man"' by Soutik Biswas, published on BBC News website on 22 Jan 2016, is at www.bbc.com/news/world-asia-india-35379168. [Thank you to Sharon & Anke Maria for telling me about this great story.]

Following the 20 new fish species discovered in the Kimberley, and the various new Australian peacock spiders, it makes me wonder how many frog species there are in Australia that haven't yet been discovered…

Protection for Freshwater Fish

The scientists who discovered the new Kimberley fish species are calling for greater protection for freshwater fish in their article: 'We discovered 20 new fish in northern Australia – now we need to protect them'. The article by Matthew Le Feuvre, James Shelley, Stephen Swearer, and Tim Dempster, all from University of Melbourne, was published in The Conversation on 20 January 2016
https://theconversation.com/we-discovered-20-new-fish-in-northern-australia-now-we-need-to-protect-them-52905

Carp Herpes Again

The use of carp herpes virus to control carp in Australia is getting closer and closer. There is an update in a CSIRO blog post from 13 January 2016, 'Using herpes virus to eradicate feral fish? Carp diem!' by Dr Ken McColl
https://blog.csiro.au/reclaiming-our-rivers-from-feral-carp/

Water Bugs in the Sea

One of the largest ecosystems on Earth is deep sea sediments. So few species have been identified and described that scientists working on the microorganisms found in these sediments are finding hundreds of new species. Many species are relatives of the water bugs we sample during our Bug Blitzes.

There is a great 14 minute TV program from Inside Science, available on ABC iView '*Micro-organisms under the Sea*', available at iview.abc.net.au/programs/inside-science/ZX8898A001S00 (available until 11:25am on 2 March 2016)

Thanks to all of you for getting out into our catchment to sample water quality every month. We learn so much, and it wouldn't be possible without your efforts.

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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