

# Catchment Update



## In General: Hot. Dry.

We had the driest summer in six years. Only 142 mm fell over the three months and a third of that fell in one day! (Late January). January was also the hottest on record with an average maximum of 32.3 degrees. Lots of sites recorded drops in water flows and levels. Plants started dying and creek banks became crusty. Then it pored just after Australia day and lots of rubbish got deposited in the gross pollution traps and around the urban ponds and lakes.

Below are the rainfall statistics, courtesy of ActewAGL's website.



One long standing member as well as a fantastic team, bade us farewell after their water-watching this summer. Details below.

## Here's the summary of measured parameters.

**Water Temp:** It was almost warm enough to take a bath at many sites this summer. In January only 2 sites out of the 35 monitored recorded temperatures below the mid 20's. The hottest was 29°C at Point Hut Ponds. The high temperatures are also suspected of being responsible for fish kills in the region. More on this below.

**pH:** High readings (>9) were recorded at a number new sites around Lake Tuggeranong and at a Lions Youth Haven site in Kambah. Discussion below.

**E.C:** The only reading of concern was at Wanniasa Creek, 1150 µS.

**Turbidity:** A mixed bag this season. The worst reading was on the Paddy's River after the January storms; 150NTUs. The higher sites in most sub-catchments remained clear as well as the two southern catchments; Gudgenby and Naas. Lower down the waterways all became cloudier than they had been for many months.

**Dissolved Oxygen:** Some extremely stagnant readings were recorded around Lake Tuggeranong and in the Paddy's River this summer. The lowest was at Miowera Homestead in February which recorded only 2.0 mg/L!

**Total Phosphorus:** Point Hut Pond and the Coleman Ridge dams all had twice the amount of phosphorus than would be considered tolerable. The gong goes to Pond Hut Pond with a reading of 0.35 mg/L in January.

**Nitrates and Nitrites:** There were no readings of concern this summer.

**Algae:** Diatoms were enjoying the low flows in the rivers and were generally be the most evident algae around. Westwood Farm experience a bright red bloom I have only ever seen in amazing 'YouTube' clips from over seas. More on this below.

## **Lower Murrumbidgee:**

***(Includes Uriarra Crossing, Casuarina Sands and the Cotter Camp ground sites.)***

The Cotter Campsite finally re-opened to the public in December and was completely full of campers when Fleur and Maree returned to monitor in January. They have also been recording the decline in the Casuarinas there over the course of the Cotter Dam enlargement and by February this year only a few individuals remained with a lot of weeds now infesting the riparian zone.

Wendy and Anne noted a reduction in the amount of water being released into the lower Murrumbidgee from Bendora Dam and the effect this was having on their readings (lower pH and higher EC). This was being done while the main Cotter dam wall was being constructed. Overall the water quality readings for this sub-catchment were good.

On a sad note, Eric is finally hanging up his WW hat after 4 years. This will leave our northern most site, Uriarra Crossing, vacant. Uriarra Crossing reflects the sum total of back ground water quality leaving our region. Of course this does not include the treated water coming out of the confluence with the Molonglo River, but it does include water that has traveled through our urban storm waterways and the over all quality is testament to the effectiveness of our lakes as nutrient filters.

## **Upper Murrumbidgee:**

***(All Murrumbidgee sites up stream of the Cotter junction. Includes lower Gudgenby River site and all creeks and dams east of the Murrumbidgee not flowing into Lake Tuggeranong)***

Dropping flows led to a marked build up in 'sand bars' in the Murrumbidgee and lower Gudgenby especially around Tharwa.. The brown/grey build up of diatoms was evident up and down the river. Barneys Gully near Gordon showed evidence of flash flooding in January but was nearly dry for the rest of the season. Deb said she had not seen it like this since she started monitoring the creek (3 years ago).

Rhonda from 'Cuppacumbalong' in Tharwa, began monitoring the ACT Conservation, Planning and Research program's 'Engineered Log Jam' site in February to gauge any negative effect on Murrumbidgee water quality from the development. This features 4 huge rock and log 'groins' that sit in the river like breakwaters to accelerate the movement of sand and scour out deep holes favoured by native fish, such as Murry cod, for breeding sites.

Westwood Farm had an interesting explosion of blood red algae in one of their dams. I'd seen it before in videos of rivers in China. It turns out to be a Euglenoid protozoan that produces the red pigment to protect itself from the sun.



**Euglenoid bloom at Westwood Farm 25.3.13 Photo Wieslaw Lichacz**

## **Tuggeranong:**

*(Tuggeranong Creek and all storm waterways flowing into Lake Tuggeranong.)*

Lake Tuggeranong is not a fan of hot, dry weather. Low flows and warm water combine to give some scary water quality readings. High pH and extremely low oxygen levels were seen a number of times in the south and central parts of the lake. Suspects include low flows over concrete drains and heightened plant (well, algae anyway) activity during the hot sunny days.

The ACT Government has enlisted the services of AECOM consultants to develop a short list of potential wetland sites around the ACT, including 2 for the Tuggeranong Creek catchment. Our new urban Landcare group Tuggeranong Lake Carers (TLC) met with the consultant to advise on preferred sites.



**Low flows and lots of algae. Tuggeranong Creek in early January**

## **Cotter:**

*(All sites on the Cotter River upstream of the Cotter Camp Ground.)*

This was unfortunately the last season for the Yurung Dhaura team. Their contract has ended and the members have graduated and moved on to other roles in the region. We wish them every success and hope to see a similar program happening again soon. I will miss them. They were one of the most reliable teams and it was always fun to join them and support them with their monitoring.

## **Daddy's:**

***(Includes Daddy's River, Gibraltar Creek in Corin Forest and all sites in the Tidbinbilla Nature Reserve)***

Paddy's River seemed to cop more mud than anywhere else, after the storm on Saturday 26<sup>th</sup>. Miranda's monitoring the next day gave the highest turbidity reading for the season. Maybe it was just luck timing. The Yurung Dhaura team also picked up a huge drop in oxygen and increased turbidity in late summer at Miowera Homestead, which lies between Miranda's site at the Tidbinbilla Road bridge and Murray's Corner on Paddy's River. Murray's Corner was also a bit low in oxygen earlier in January but nothing as drastic. Tidbinbilla Nature Reserve showed the water remaining healthy even through very low flows.



**Murray's Corner in February. Photo Fleur Horan.**

## **Gudgenby:**

***(Includes all creeks and streams flowing into the Gudgenby River. Most sites are in the Namadgi National Park).***

Ian found a dead trout floating in the Gudgenby River, near Top Naas. "No damage around the mouth that may indicate a hook, no evidence of disease. Appeared well fed and died recently, possibly due to stress from environmental conditions e.g. warmer temperatures, oxygen deprived." I spoke to Mark Jakobson from CPR who said it was not uncommon to see fish kills as a result of warm water temperatures. Ian's site measured just over 26°C on this day. This was not outstandingly high compared to other sites this summer. I am concerned for what this may mean for native fish populations as we continue to experience hotter drier conditions in future.



**Candice in the creek. Photo Ian Long.**

## **Naas:**

***(Includes all creeks and streams flowing into the Naas River).***

Ian noted in January “Local land owner (Chris) was at the crossing whilst I was testing and informed me that during the recent high temps of 40 degrees the creek had actually stopped flowing. He said the last time that had happened was 10yrs ago during the drought.” The ‘creek’ he is referring to is the Naas River. Both it and the small Gudgenby Creek that Ian monitors, were extremely low. Ian was joined by Uni student Candice in February, who assisted with macro invertebrate surveys at his sites. There was not enough water in Gudgenby Creek to dip a net, so they stirred up what bugs they could in the creek and ‘made a guess’. Never let it be said that our volunteers aren’t resourceful.



Naas River at Caloola Farm in Feb This crossing usually has a good flow over water over it. Photo Ian Long

**A huge thank you to all those groups and individuals involved in collecting data for this update. Waterwatch volunteers provide vital and immediate information on the state of our waterways which is being increasingly used by government and corporations locally and nationally. For more information contact the SACTCG Waterwatch Coordinator on 62966400 or at [waterwatch@sactcg.org.au](mailto:waterwatch@sactcg.org.au)**

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