

Dusi 2010

Tuesday 26th January

The weather co-operated, the river quality monitoring intensity was stepped up and the two main municipalities (Msunduzi and eThekweni) pulled out the stops to get their sewer systems in order. The result was possibly the best water quality we have had a on a Dusi in the last 10 years.

The senior managers from the Msunduzi Municipality's sewer maintenance section attended the pre-race "Officials and Helpers" dinner at the Natal Canoe Club on the evening of Tuesday 19th January, and were publicly singled out by Dusi Chairman Cameron McKenzie for the additional effort they had put in to make this possible. Thokozani Maseko, head of Water and Sanitation and Acting Deputy Municipal Manager said to me, "I wish every day was Dusi Day. Now that we have got the river like this, we need to keep it like this". And we can all say "Amen" to that. We are by no means out of the woods yet, but there is hope. DUCT will be surveying the Dusi paddlers over the next few weeks to check how many experienced symptoms of Dusi Guts either during or after the race, and we will report back via the KNCU and CSA newsletters, and via our website. There is still heaps of work to do on and around the rivers of course. For one thing, although the hyacinth and pistia was not as bad as in 2009, there is still far too much of it in the rivers. We will see what we can do in the year ahead to get that better controlled.

Tuesday 19th 13h05

Results for the samples taken yesterday by Umngeni Water show a continued improvement, although there are still issues in the Baynespruit. These are being dealt with and will be sampled again today. The data in from Durban (see table below) is also encouraging. With clean water being released from the dams (Henley, Nagle and Inanda) it looks like we can expect unusually good water quality for this year's Dusi. There is some light rain predicted for tomorrow, but this will be spread through the day and not enough to make much difference in the quality.

Dusi above Edendale weir 2 480 E coli/100ml
Dusi Campsdrift at NCC 2 760

Dusi at Low Level 1 350
Dusi Moto X 1 200

Campbells put in 1 000

Slangspruit Newport rd 4 000
Slangspruit at Dusi confluence 20 000
Baynespruit Sobantu 88 000
Baynespruit Greytown rd 46 000

Monday 18th 10:21 am

What a pleasure to be the bearer of good news for a change. The results of yesterday's sampling are as follows -
Dusi above Edendale weir 13 300 E coli/100ml
Dusi Campsdrift at NCC 1 300
Dusi at Mussons 2 800
Dusi at Low Level 4 300
Dusi Moto X 2 100
Dusi Grimthorpe rd 1 700
Campbells put in 400

Slangspruit Newport rd 17 200
Slangspruit at Dusi confluence 3 100
Baynespruit Sobantu 10 000
Baynespruit Greytown rd 28 000

Conclusions : Msunduzi have clearly dealt with the major problems that were causing 1 000 000 + readings in the Baynespruit last week. However, it appears that there is still some contamination in the upper Baynespruit and upper Slangspruit to look into.

Paddlers, don't forget that on race day 3/4 of the flow is Henley water, which registered 40 E Coli/100 ml when tested on 11/01/10, so this does improve the quality significantly, whatever the base status is.

Umngeni Water is sampling this morning – will update you again tomorrow.

And a big thanks to Ian Bailey’s lab at Umngeni Water for processing the above samples on a Sunday!

Some data from Durban has just come in. (18 January 11h00). Note, while these levels are not too bad, just as the Duzi quality is improved by the Henley release, the uMngeni quality will be improved by the Inanda release.

E Coli results along the MGENI River for the month of January

Sample Point
Location
E.Coli (12 Jan)
E.Coli (15 Jan)
E.Coli (18 Jan)

R-MGENI_08
Umngeni River at Kennedy Road
1000
1500
500

R-MGENI_13
Umngeni - South end Ellis Brown Viaduct
500
4000
2500

R-MGENI_70
Umngeni River at Riverdene
1500
3000
1500

R-MGENI_71
Umngeni River below NWWTW
500
5500
500

R-MGENI_75
Combined Nkutu / Molweni Rivers
4500
1000
0

R-MGENI_80
Weir below Inanda dam
500

R-MGENI_91
Umgeni - North end of Connaught Bridge
500
3500
0

R-MGENI_92
Umgeni - North bank at Browns Drift
1000
7000
500

[Quality Trend - uMsunduzi \(PDF Download\)](#)

[Quality Trend - Blue Lagoon \(PDF Download\)](#)

[Pietermaritzburg - Latest Standard Data \(PDF Download\)](#)

Note - Water Quality for races on the Duzi River

Water is always released from the Henley Dam for the canoe races in Pietermaritzburg. The quality of water released from Henley is typically very good (less than 500 E.coli per 100ml). As this is a higher flow than the flow in the river without the release, this Henley water does significantly improve the quality of the water that paddlers are exposed to.

Interpreting the results

If you are a microbiologist or a seasoned paddler the stats above might mean something to you… but if not, you might find the following table useful when trying to interpret what the E.coli count means for you as a paddler. Paddling is defined as a secondary contact sport and internationally the accepted safe level is 2 000 E.coli per 100ml. However, on the uMsunduzi and uMngeni Rivers paddlers often paddle with higher E.coli levels without suffering any ill effects. In years when the quality of the Duzi has been 10 000 or lower, the incidence of “Duzi guts” during events such as the Dusi Canoe Marathon has been low. In years when it has been high (in the 20 000 to 100 000 range) due to major storms, the incidence of “Duzi guts” has been high (up to 50% of the paddlers being affected). After consultation with Umgeni Water and Water Affairs scientists, DUCT recommends the following guidelines for

paddlers:

E. coli count / 100 ml
Canoe use class

0 - 2000
Excellent

2001 - 5 000
Good

5 001 - 10 000
Acceptable

10 001 - 25 000
Tolerable

25 001 - 50 000
Poor

50 000 - 150 000
Unacceptable

>150 000
Dangerous

Thanks to Talbot Laboratories, Umngeni Water and WSP Environmental for monitoring the water quality in Durban and Pietermaritzburg on a weekly basis. DUCT does additional sampling at strategic times and places.
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