

<b>STILL CREEK CATCHMENT LANDCARE WATER TEST RESULTS 2009/2018 CONCLUSIONS</b>	
<b>General conclusions</b>	
Water tests have shown that the catchment is in good condition	
On exit from the catchment into Berowra Creek, most results are good	
Further upstream in the catchment, closer to residences, results are not as good, but are not a major problem	
Chartons Creek tends to be high in phosphorous, with quite notable surges after heavy rain	
Still Creek at Mansfield Road tends to be high in salts, as measured by electrical conductivity tests and shows a large numerical variation	
E coli incidence on Chartons Ck appears to be random and not related to rainfall	
Waterbug (Macroinvertebrates) observations have found Mayflies and Caddisflies at Chartons Ck and Still Ck Crosslands and Stoneflies sometimes at Crosslands	
<b>Conclusions about compliance with ANZECC water quality guidelines</b>	
<b>Available</b>	Good on exit from the catchment with 95% within guidelines
<b>Phosphate</b>	83% of mid-catchment tests were within guidelines
<b>Salts</b>	27% on exit from the catchment likely due to the geology and human disturbance of the soil and not regarded as indicating a problem
<b>(Electrical conductivity)</b>	7% of mid-catchment results were within guidelines due to geology rather than human disturbance of the soil and not regarded as indicating a problem
<b>Dissolved oxygen</b>	Good results with 95% within guidelines on catchment exit and 99% and 90% within the catchment
<b>E coli</b>	Very good: almost no traces evident
<b>Turbidity</b>	Very good: almost 100% within guidelines
<b>pH</b>	Very good:100% within guidelines
<b>Conclusions from test means</b>	
<b>Available</b>	Test results vary greatly: the standard deviation to mean ratio is 1.7 for exit and 2.5 for mid catchment, partly because of the limitations of measurement accuracy below 0.05
<b>Phosphate</b>	2013/16 show a decrease by approx 40% in the means due to fewer very high readings and to 3.4 times as many zero readings with the newer measuring device
	Mid catchment is 1.8 x exit site due to dilution plus biological clean-up within the 50% of catchment not populated
	The significant effect of rain within 24 hours, compared with nil for 7 days is 2.5 x at Chartons, 2.8 x at Still Mansfield and 1.1 x at catchment exit
	Chartons Ck and Still Ck at Mansfield Rd results are fairly similar after allowing for rain conditions
	Chartons Ck without flow is 5 x normal due to build up in waterholes without flushing from 2012 studies
	This is affected by rain within 24 hours: medium rain is 8 x light rain, heavy rain is 19 x light rain at Chartons Ck
	Water treatment (3 stage for grey and black household effluent) is 1700 x exit site despite using no-phos cleaners in a brief earlier study
<b>Salts</b>	Results are fairly consistent: the standard deviation as a % of the mean is 30% for Chartons and Still Mansfield and 21% for catchment exit
<b>(Electrical Conductivity)</b>	There is no significant trend over the eight years of measurements, although the standard deviation at Still Mansfield is up by 22% in recent years
	Still Ck Mansfield Rd is 1.4 x Chartons Ck with a high 99% level of confidence, unknown cause, presumed to be geology differences
	Chartons Ck without flow is 1.7 x normal due to build up in waterholes without flushing
	George Hall Ck is similar to Still Ck at Mansfield Rd
	Halls Ck is in very good condition, with a low population around it
	Medium or heavy rain within 24 hours of testing has a beneficial effect on EC due to dilution
	Water treatment (3 stage for grey and black household effluent) is 2.2 x mid-catchment test results in an earlier study
<b>Dissolved Oxygen</b>	Results are fairly consistent at the three sites with the standard deviations about 20% of the means
	Chartons Ck without flow is 0.6 x normal due to reduced oxygenating movement in waterholes
	A brief diurnal trial on a flowing creek showed no significant variation during the day (single day trial of 3 readings)