Drinking Water Quality Summary - July 2015



Hunter Water provides safe and reliable drinking water to over half a million customers in the Lower Hunter. The drinking water we supply is routinely tested throughout our water supply systems. Results are based on samples representative of water supplied to customers' taps. Results for microbiological and key physical/chemical parameters are summarised below:

Whole of Hunter Water

Whole of Hunter Water - key health analytes

Analyte	Units of measure	ADWG health guideline value	Performance standard (assessment over previous 12 months)		% of E. coli results < 1 over the last 12 months	Met performance standard
E. coli	MPN/100mL	Should not be detected in 100mL	At least 98% of test results <1		100.00%	Yes
Analyte	Units of Measure	ADWG health guideline value	Performance standard (assessment over previous 12 months)	Average for Month	95th Percentile over the last 12 months	Met performance standard
Fluoride	mg/L	1.5		0.56	1.05	Yes
Chlorine	mg/L	5	95th percentile of test	0.87	1.36	Yes
Copper	mg/L	2	results less than	0.004	0.010	Yes
Lead	mg/L	0.01	respective ADWG health	0.000	0.001	Yes
Manganese	mg/L	0.5	guideline value	0.006	0.012	Yes
Trihalomethanes	mg/L	0.25		0.063	0.156	Yes

Whole of Hunter Water - key aesthetic analytes

Analyte	Units of Measure	ADWG aesthetic guideline value	Performance standard (assessment over previous 12 months)	Average for Month	12 month average result	Met performance standard
Iron	mg/L	0.3		0.027	0.022	Yes
Aluminium	mg/L	0.2	Average of test results	0.045	0.049	Yes
Copper	mg/L	1	less than respective	0.004	0.005	Yes
Zinc	mg/L	3	ADWG aesthetic guideline	0.004	0.005	Yes
Turbidity	NTU	5	value	0.3	0.3	Yes
True colour	HU	15		5	5	Yes
рН	pH units	6.5-9.2	Average of test results between 6.5 - 9.2 pH units	7.57	7.50	Yes

Brief explanation of key parameters: <u>Key Physical, Chemical and Microbiological Parameters</u>

or for more detail see: <u>Australian Drinking Water Guidelines 2011</u>

Map showing water quality zones: Water Quality Zones at Hunter Water

Water Quality Zones Chichester Zone - key health analytes

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Analyte	Units of Measure	ADWG health guideline value	Performance standard (assessment over previous 12 months)		% of E. coli results < 1 over the last 12 months	Met performance standard
E. coli	MPN/100mL	Should not be detected in 100mL	At least 98% of test results <1		100.00%	Yes
Analyte	Units of Measure	ADWG health guideline value	Performance standard (assessment over previous 12 months)	Average for Month	95th Percentile over the last 12 months	Met performance standard
Fluoride	mg/L	1.5	12 monuto)	0.28	0.93	Yes
Chlorine	mg/L	5	95th percentile of test	0.84	1.46	Yes
Copper	mg/L	2	results less than	0.004	0.005	Yes
Lead	mg/L	0.01	respective ADWG health	0.001	0.001	Yes
Manganese	mg/L	0.5	guideline value	0.004	0.014	Yes
Trihalomethanes	mg/L	0.25		0.060	0.134	Yes
Chichester Zo	ne – key aesthetic	analvtes				
Analyte	Units of Measure	ADWG aesthetic guideline value	Performance standard (assessment over previous 12 months)	Average for Month	12 month average result	Met performance standard
Iron	mg/L	0.3		0.027	0.023	Yes
Aluminium	mg/L	0.2	Average of test results	0.047	0.055	Yes
Copper	mg/L	1	less than respective	0.004	0.003	Yes
Zinc	mg/L	3	ADWG aesthetic guideline	0.004	0.003	Yes
Turbidity	NTU	5	value	0.3	0.3	Yes
True colour	HU	15		5	5	Yes
H	pH units	6.5-9.2	Average of test results between 6.5 - 9.2 pH units	7.65	7.60	Yes
	Zone - key health					
Analyte	Units of Measure	ADWG health guideline value	Performance standard (assessment over previous 12 months)	Average for Month	% of E. coli results < 1 over the last 12 months	Met performance standard
E. coli	MPN/100mL	Should not be detected in 100mL	At least 98% of test results <1		100.00%	Yes
Analyte	Units of Measure	ADWG health guideline value	Performance standard (assessment over previous 12 months)	Average for Month	95th Percentile over the last 12 months	Met performance standard
Fluoride	mg/L	1.5	, , , , , , , , , , , , , , , , , , , ,	0.85	1.05	Yes
Chlorine	mg/L	5	95th percentile of test	0.96	1.43	Yes
Copper			33th percentile of test	0.90	1.40	
Сорреі	mg/L	2	results less than	0.90	0.006	Yes
···	mg/L mg/L					
Lead		2	results less than	0.003	0.006	Yes
Lead Manganese	mg/L	2 0.01	results less than respective ADWG health	0.003 0.000	0.006 0.001	Yes Yes
Lead Manganese Trihalomethanes	mg/L mg/L	2 0.01 0.5 0.25	results less than respective ADWG health	0.003 0.000 0.007	0.006 0.001 0.012	Yes Yes Yes
Lead Manganese Trihalomethanes Grahamstown	mg/L mg/L mg/L	2 0.01 0.5 0.25	results less than respective ADWG health	0.003 0.000 0.007	0.006 0.001 0.012	Yes Yes Yes Yes
Lead Manganese Trihalomethanes Grahamstown Analyte	mg/L mg/L mg/L Zone – key aesth Units of Measure	2 0.01 0.5 0.25 etic analytes ADWG aesthetic guideline value	results less than respective ADWG health guideline value	0.003 0.000 0.007 0.085	0.006 0.001 0.012 0.175 12 month average result	Yes Yes Yes Yes Yes Yes Standard
Lead Manganese Trihalomethanes Grahamstown Analyte	mg/L mg/L mg/L Zone – key aesth Units of Measure mg/L	2 0.01 0.5 0.25 etic analytes ADWG aesthetic guideline value 0.3	results less than respective ADWG health guideline value Performance standard (assessment over previous 12 months)	0.003 0.000 0.007 0.085 Average for Month 0.029	0.006 0.001 0.012 0.175 12 month average result 0.021	Yes Yes Yes Yes Yes Yes Yes
Lead Manganese Trihalomethanes Grahamstown Analyte	mg/L mg/L mg/L Zone – key aesth Units of Measure mg/L mg/L	2 0.01 0.5 0.25 etic analytes ADWG aesthetic guideline value	results less than respective ADWG health guideline value Performance standard (assessment over previous	0.003 0.000 0.007 0.085	0.006 0.001 0.012 0.175 12 month average result	Yes Yes Yes Yes Yes Yes Standard
Lead Manganese Trihalomethanes Grahamstown Analyte Iron Aluminium	mg/L mg/L mg/L Zone – key aesth Units of Measure mg/L	2 0.01 0.5 0.25 etic analytes ADWG aesthetic guideline value 0.3	results less than respective ADWG health guideline value Performance standard (assessment over previous 12 months)	0.003 0.000 0.007 0.085 Average for Month 0.029	0.006 0.001 0.012 0.175 12 month average result 0.021	Yes Yes Yes Yes Yes Yes Met performance standard Yes
Lead Manganese Trihalomethanes Grahamstown Analyte Iron Aluminium Copper	mg/L mg/L mg/L Zone – key aesth Units of Measure mg/L mg/L	2 0.01 0.5 0.25 etic analytes ADWG aesthetic guideline value 0.3 0.2	results less than respective ADWG health guideline value Performance standard (assessment over previous 12 months) Average of test results	0.003 0.000 0.007 0.085 Average for Month 0.029 0.058	0.006 0.001 0.012 0.175 12 month average result 0.021 0.063	Yes Yes Yes Yes Met performance standard Yes Yes
Lead Manganese Trihalomethanes Grahamstown Analyte Iron Aluminium Copper	mg/L mg/L mg/L Zone – key aesth Units of Measure mg/L mg/L mg/L mg/L	2 0.01 0.5 0.25 etic analytes ADWG aesthetic guideline value 0.3 0.2 1	results less than respective ADWG health guideline value Performance standard (assessment over previous 12 months) Average of test results less than respective	0.003 0.000 0.007 0.085 Average for Month 0.029 0.058 0.003	0.006 0.001 0.012 0.175 12 month average result 0.021 0.063 0.003	Yes Yes Yes Yes Met performance standard Yes Yes Yes
Lead Manganese Trihalomethanes	mg/L mg/L mg/L Zone – key aesth Units of Measure mg/L mg/L mg/L mg/L mg/L	2 0.01 0.5 0.25 etic analytes ADWG aesthetic guideline value 0.3 0.2 1 3	results less than respective ADWG health guideline value Performance standard (assessment over previous 12 months) Average of test results less than respective ADWG aesthetic guideline	0.003 0.000 0.007 0.085 Average for Month 0.029 0.058 0.003	0.006 0.001 0.012 0.175 12 month average result 0.021 0.063 0.003 0.004	Yes Yes Yes Yes Yes Yes Met performance standard Yes Yes Yes Yes

Water Quality Zones

		y health analytes				
Analyte	Units of Measure	ADWG health guideline value	Performance standard (assessment over previous 12 months)	Average for Month	% of E. coli results < 1 over the last 12 months	Met performanc standard
E. coli	MPN/100mL	Should not be detected in 100mL	At least 98% of test results <1		100.00%	Yes
Analyte	Units of Measure	ADWG health guideline value	Performance standard (assessment over previous 12 months)	Average for Month	95th Percentile over the last 12 months	Met performanc standard
Fluoride	mg/L	1.5		0.96	1.05	Yes
Chlorine	mg/L	5	95th percentile of test	0.54	0.86	Yes
Copper	mg/L	2	results less than	0.004	0.008	Yes
Lead	mg/L	0.01	respective ADWG health	0.000	0.001	Yes
Manganese	mg/L	0.5	guideline value	0.002	0.008	Yes
Trihalomethanes	mg/L	0.25		0.047	0.126	Yes
l emon Tree F	Passage Zone - key	/ / aesthetic analy	tes			
Analyte	Units of Measure	ADWG aesthetic	Performance standard	Average for Month	12 month average	Met performanc
Allalyte	Office of Measure	guideline value	(assessment over previous 12 months)	Average for month	result	standard
Iron	mg/L	0.3		0.019	0.021	Yes
Aluminium	mg/L	0.2	Average of test results	0.026	0.032	Yes
Copper	mg/L	1	less than respective	0.004	0.005	Yes
Zinc	mg/L	3	ADWG aesthetic guideline	0.005	0.005	Yes
Turbidity	NTU	5	value	0.2	0.2	Yes
True colour	HU	15		5	5	Yes
рН	pH units	6.5-9.2	Average of test results between 6.5 - 9.2 pH units	7.61	7.48	Yes
Anna Bay / Ne	elson Bay Zone - k	ey health analyte	es ·			
Anna Bay / Ne Analyte	Units of Measure	ey health analyte ADWG health guideline value	Performance standard (assessment over previous 12 months)	Average for Month	% of E. coli results < 1 over the last 12 months	Met performanc standard
Analyte		ADWG health	Performance standard (assessment over previous	Average for Month	1 over the last 12	•
Analyte E. coli	Units of Measure	ADWG health guideline value Should not be	Performance standard (assessment over previous 12 months)	Average for Month Average for Month	1 over the last 12 months 100.00%	standard Yes
Analyte E. <i>coli</i> Analyte	Units of Measure MPN/100mL	ADWG health guideline value Should not be detected in 100mL ADWG health	Performance standard (assessment over previous 12 months) At least 98% of test results <1 Performance standard (assessment over previous		1 over the last 12 months 100.00% 95th Percentile over	standard Yes Met performance
Analyte E. coli Analyte Fluoride	Units of Measure MPN/100mL Units of Measure	ADWG health guideline value Should not be detected in 100mL ADWG health guideline value	Performance standard (assessment over previous 12 months) At least 98% of test results <1 Performance standard (assessment over previous	Average for Month	1 over the last 12 months 100.00% 95th Percentile over the last 12 months	Yes Met performand standard
Analyte E. coli Analyte Fluoride Chlorine	Units of Measure MPN/100mL Units of Measure mg/L	ADWG health guideline value Should not be detected in 100mL ADWG health guideline value 1.5	Performance standard (assessment over previous 12 months) At least 98% of test results <1 Performance standard (assessment over previous 12 months)	Average for Month 0.35	1 over the last 12 months 100.00% 95th Percentile over the last 12 months 1.05	Yes Met performand standard Yes
Analyte E. coli Analyte Fluoride Chlorine Copper	MPN/100mL Units of Measure Mg/L mg/L	ADWG health guideline value Should not be detected in 100mL ADWG health guideline value 1.5 5	Performance standard (assessment over previous 12 months) At least 98% of test results <1 Performance standard (assessment over previous 12 months) 95th percentile of test	Average for Month 0.35 0.76	1 over the last 12 months 100.00% 95th Percentile over the last 12 months 1.05 0.97	Yes Met performand standard Yes Yes
E. coli Analyte Fluoride Chlorine Copper Lead	MPN/100mL Units of Measure mg/L mg/L mg/L	ADWG health guideline value Should not be detected in 100mL ADWG health guideline value 1.5 5	Performance standard (assessment over previous 12 months) At least 98% of test results <1 Performance standard (assessment over previous 12 months) 95th percentile of test results less than	0.35 0.76 0.004	1 over the last 12 months 100.00% 95th Percentile over the last 12 months 1.05 0.97 0.026	Yes Met performand standard Yes Yes Yes
	MPN/100mL Units of Measure mg/L mg/L mg/L mg/L	ADWG health guideline value Should not be detected in 100mL ADWG health guideline value 1.5 5 2 0.01	Performance standard (assessment over previous 12 months) At least 98% of test results <1 Performance standard (assessment over previous 12 months) 95th percentile of test results less than respective ADWG health	0.35 0.76 0.004	1 over the last 12 months 100.00% 95th Percentile over the last 12 months 1.05 0.97 0.026 0.001	Yes Met performance standard Yes Yes Yes Yes Yes
E. coli Analyte Fluoride Chlorine Copper Lead Manganese Trihalomethanes	MPN/100mL Units of Measure mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	ADWG health guideline value Should not be detected in 100mL ADWG health guideline value 1.5 5 2 0.01 0.5 0.25	Performance standard (assessment over previous 12 months) At least 98% of test results <1 Performance standard (assessment over previous 12 months) 95th percentile of test results less than respective ADWG health guideline value	0.35 0.76 0.004 0.000 0.003	1 over the last 12 months 100.00% 95th Percentile over the last 12 months 1.05 0.97 0.026 0.001 0.007	Yes Met performance standard Yes Yes Yes Yes Yes Yes Yes
E. coli Analyte Fluoride Chlorine Copper Lead Manganese Trihalomethanes Anna Bay / Ne	MPN/100mL Units of Measure mg/L	ADWG health guideline value Should not be detected in 100mL ADWG health guideline value 1.5 5 2 0.01 0.5 0.25 ey aesthetic ana	Performance standard (assessment over previous 12 months) At least 98% of test results <1 Performance standard (assessment over previous 12 months) 95th percentile of test results less than respective ADWG health guideline value	0.35 0.76 0.004 0.000 0.003 0.028	1 over the last 12 months 100.00% 95th Percentile over the last 12 months 1.05 0.97 0.026 0.001 0.007 0.098	Yes Met performand standard Yes Yes Yes Yes Yes Yes Yes Ye
Analyte E. coli Analyte Fluoride Chlorine Copper Lead Manganese Frihalomethanes Anna Bay / Ne	MPN/100mL Units of Measure mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	ADWG health guideline value Should not be detected in 100mL ADWG health guideline value 1.5 5 2 0.01 0.5 0.25	Performance standard (assessment over previous 12 months) At least 98% of test results <1 Performance standard (assessment over previous 12 months) 95th percentile of test results less than respective ADWG health guideline value	0.35 0.76 0.004 0.000 0.003	1 over the last 12 months 100.00% 95th Percentile over the last 12 months 1.05 0.97 0.026 0.001 0.007 0.098	Yes Met performand standard Yes Yes Yes Yes Yes Yes Yes Ye
E. coli Analyte Fluoride Chlorine Copper Lead Manganese Trihalomethanes Anna Bay / Ne	MPN/100mL Units of Measure mg/L	ADWG health guideline value Should not be detected in 100mL ADWG health guideline value 1.5 5 2 0.01 0.5 0.25 ey aesthetic anal ADWG aesthetic	Performance standard (assessment over previous 12 months) At least 98% of test results <1 Performance standard (assessment over previous 12 months) 95th percentile of test results less than respective ADWG health guideline value lytes Performance standard (assessment over previous	0.35 0.76 0.004 0.000 0.003 0.028	1 over the last 12 months 100.00% 95th Percentile over the last 12 months 1.05 0.97 0.026 0.001 0.007 0.098	Yes Met performand standard Yes Yes Yes Yes Yes Yes Yes Met performand
Analyte E. coli Analyte Fluoride Chlorine Copper Lead Manganese Frihalomethanes Anna Bay / Ne	MPN/100mL Units of Measure mg/L	ADWG health guideline value Should not be detected in 100mL ADWG health guideline value 1.5 5 2 0.01 0.5 0.25 ey aesthetic anal ADWG aesthetic guideline value	Performance standard (assessment over previous 12 months) At least 98% of test results <1 Performance standard (assessment over previous 12 months) 95th percentile of test results less than respective ADWG health guideline value lytes Performance standard (assessment over previous	0.35 0.76 0.004 0.000 0.003 0.028 Average for Month	1 over the last 12 months 100.00% 95th Percentile over the last 12 months 1.05 0.97 0.026 0.001 0.007 0.098 12 month average result	Yes Met performand standard Yes Yes Yes Yes Yes Yes Yes Ye
Analyte E. coli Analyte Fluoride Chlorine Copper Lead Manganese Frihalomethanes Anna Bay / Ne Analyte ron Aluminium	MPN/100mL Units of Measure mg/L	ADWG health guideline value Should not be detected in 100mL ADWG health guideline value 1.5 5 2 0.01 0.5 0.25 ey aesthetic anal ADWG aesthetic guideline value 0.3	Performance standard (assessment over previous 12 months) At least 98% of test results <1 Performance standard (assessment over previous 12 months) 95th percentile of test results less than respective ADWG health guideline value ytes Performance standard (assessment over previous 12 months)	0.35 0.76 0.004 0.000 0.003 0.028 Average for Month 0.028	1 over the last 12 months 100.00% 95th Percentile over the last 12 months 1.05 0.97 0.026 0.001 0.007 0.098 12 month average result 0.006	Yes Met performand standard Yes Yes Yes Yes Yes Yes Yes Ye
Analyte E. coli Analyte Fluoride Chlorine Copper Lead Manganese Trihalomethanes Anna Bay / Ne Analyte Iron Aluminium Copper	MPN/100mL Units of Measure mg/L mg/L	ADWG health guideline value Should not be detected in 100mL ADWG health guideline value 1.5 5 2 0.01 0.5 0.25 ey aesthetic anal ADWG aesthetic guideline value 0.3 0.2	Performance standard (assessment over previous 12 months) At least 98% of test results <1 Performance standard (assessment over previous 12 months) 95th percentile of test results less than respective ADWG health guideline value lytes Performance standard (assessment over previous 12 months) Average of test results	0.35 0.76 0.004 0.000 0.003 0.028 Average for Month 0.028 0.047	1 over the last 12 months 100.00% 95th Percentile over the last 12 months 1.05 0.97 0.026 0.001 0.007 0.098 12 month average result 0.006 0.049	Yes Met performand standard Yes Yes Yes Yes Yes Yes Yes Ye
Analyte E. coli Analyte Fluoride Chlorine Copper Lead Manganese Trihalomethanes Anna Bay / Ne Analyte Iron Aluminium Copper Zinc	MPN/100mL Units of Measure mg/L	ADWG health guideline value Should not be detected in 100mL ADWG health guideline value 1.5 5 2 0.01 0.5 0.25 ey aesthetic anal ADWG aesthetic guideline value 0.3 0.2 1	Performance standard (assessment over previous 12 months) At least 98% of test results <1 Performance standard (assessment over previous 12 months) 95th percentile of test results less than respective ADWG health guideline value lytes Performance standard (assessment over previous 12 months) Average of test results less than respective	0.35 0.76 0.004 0.000 0.003 0.028 Average for Month 0.028 0.047 0.004	1 over the last 12 months 100.00% 95th Percentile over the last 12 months 1.05 0.97 0.026 0.001 0.007 0.098 12 month average result 0.006 0.049 0.008	Yes Met performand standard Yes Yes Yes Yes Yes Yes Yes Ye
E. coli Analyte Fluoride Chlorine Copper Lead Manganese Trihalomethanes	MPN/100mL Units of Measure mg/L	ADWG health guideline value Should not be detected in 100mL ADWG health guideline value 1.5 5 2 0.01 0.5 0.25 ey aesthetic anal ADWG aesthetic guideline value 0.3 0.2 1 3	Performance standard (assessment over previous 12 months) At least 98% of test results <1 Performance standard (assessment over previous 12 months) 95th percentile of test results less than respective ADWG health guideline value ytes Performance standard (assessment over previous 12 months) Average of test results less than respective ADWG aesthetic guideline	Average for Month 0.35 0.76 0.004 0.000 0.003 0.028 Average for Month 0.028 0.047 0.004 0.006	1 over the last 12 months 100.00% 95th Percentile over the last 12 months 1.05 0.97 0.026 0.001 0.007 0.098 12 month average result 0.006 0.049 0.008 0.006	Yes Met performance standard Yes Yes Yes Yes Yes Yes Yes Ye

Water Quality Zones

Gresford Z	one - key health anal	ytes				
Analyte	Units of Measure	ADWG health guideline value	Performance standard (assessment over previous 12 months)	Average for Month	% of E. coli results < 1 over the last 12 months	Met performance standard
E. coli	MPN/100mL	Should not be detected in 100mL	At least 98% of test results <1		100.00%	Yes
Analyte	Units of Measure	ADWG health guideline value	Performance standard (assessment over previous 12 months)	Average for Month	95th Percentile over the last 12 months	Met performance standard
Chlorine	mg/L	5	95th percentile of test results less than respective ADWG health guideline value	0.84	1.02	Yes
Gresford Z	one - key aesthetic a	nalytes				
Analyte	Units of Measure	ADWG aesthetic guideline value	Performance standard (assessment over previous 12 months)	Average for Month	12 month average result	Met performance standard
pН	pH units	6.5-9.2	Average of test results between 6.5 - 9.2 pH units	7.75	7.85	Yes