Drinking Water Quality Summary - March 2018

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		99.83%	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	95th percentile of test results less than respective ADWG health guideline value	0.90	1.01	Yes
Chlorine	mg/L	5		0.64	1.18	Yes
Copper	mg/L	2		0.010	0.023	Yes
Lead	mg/L	0.01		0.000	0.001	Yes
Manganese	mg/L	0.5		0.005	0.013	Yes
Trihalomethanes	mg/L	0.25		0.106	0.145	Yes

Whole of Hunter Water - PFOS, PFHxS & PFOA

Analyte	Units of measure	FSANZ health based guidance value	Performance standard (assessment over previous 12 months)*	% of results < FSANZ guidance value over the last 12 months^	% of results < individual limit of reporting (0.002) over the last 12 months	Met performance standard
PFOS + PFHxS	µg/L	0.07	100% of test results <0.07	100.00%	84.84%	Yes
PFOA	µg/L	0.56	100% of test results <0.56	100.00%	100.00%	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	Average of test results less than respective ADWG aesthetic guideline value	0.019	0.023	Yes
Aluminium	mg/L	0.2		0.049	0.046	Yes
Copper	mg/L	1		0.010	0.007	Yes
Zinc	mg/L	3		0.005	0.005	Yes
Turbidity	NTU	5		0.2	0.2	Yes
True colour	HU	15		5	5	Yes
pH	pH units	6.5-9.2	Average of test results between 6.5 - 9.2 pH units	7.53	7.58	Yes

Brief explanation of key parameters: Key Physical, Chemical and Microbiological Parameters

A 95th percentile is a statistical method to evaluate the long-term performance standard for Health-related analytes. Additional information is available in Section 10.3.2 and Information Sheet 3.3 of the Australian Drinking Water Guidelines 2011 (ADWG).

For more detail please refer: Australian Drinking Water Guidelines 2011

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

FSANZ - Food Standards Australia New Zealand

Water Quality Zones

Chichester Zone - 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	95th percentile of test results less than respective ADWG health guideline value	0.87	0.98	Yes
Chlorine	mg/L	5		0.53	1.26	Yes
Copper	mg/L	2		0.010	0.018	Yes
Lead	mg/L	0.01		0.000	0.001	Yes
Manganese	mg/L	0.5		0.007	0.018	Yes
Trihalomethanes	mg/L	0.25		0.129	0.150	Yes

Chichester Zone - PFOS, PFHxS & PFOA

Analyte	Units of measure	FSANZ health based guidance value	Performance standard (assessment over previous 12 months)*	% of results < FSANZ guidance value over the last 12 months^	% of results < individual limit of reporting (0.002) over the last 12 months	Met performance standard
PFOS + PFHxS	µg/L	0.07	100% of test results <0.07	100.00%	93.06%	Yes
PFOA	µg/L	0.56	100% of test results <0.56	100.00%	100.00%	Yes

Chichester Zone – 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	Average of test results less than respective ADWG aesthetic guideline value	0.016	0.022	Yes
Aluminium	mg/L	0.2		0.050	0.050	Yes
Copper	mg/L	1		0.010	0.005	Yes
Zinc	mg/L	3		0.009	0.004	Yes
Turbidity	NTU	5		0.2	0.3	Yes
True colour	HU	15		5	5	Yes
pH	pH units	6.5-9.2	Average of test results between 6.5 - 9.2 pH units	7.64	7.65	Yes

Grahamstown Zone - key 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 performance standard
E. coli	MPN/100mL	Should not be detected in 100mL	At least 98% of test results <1		99.89%	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	95th percentile of test results less than respective ADWG health guideline value	0.94	1.03	Yes
Chlorine	mg/L	5		0.69	1.17	Yes
Copper	mg/L	2		0.012	0.024	Yes
Lead	mg/L	0.01		0.001	0.001	Yes
Manganese	mg/L	0.5		0.004	0.010	Yes
Trihalomethanes	mg/L	0.25		0.111	0.166	Yes

Grahamstown Zone - PFOS, PFHxS & PFOA

Analyte	Units of measure	FSANZ health based guidance value	Performance standard (assessment over previous 12 months)*	% of results < FSANZ guidance value over the last 12 months^	% of results < individual limit of reporting (0.002) over the last 12 months	Met performance standard
PFOS + PFHxS	µg/L	0.07	100% of test results <0.07	100.00%	75.86%	Yes
PFOA	µg/L	0.56	100% of test results <0.56	100.00%	100.00%	Yes

Grahamstown Zone – 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	Average of test results less than respective ADWG aesthetic guideline value	0.018	0.022	Yes
Aluminium	mg/L	0.2		0.052	0.050	Yes
Copper	mg/L	1		0.012	0.007	Yes
Zinc	mg/L	3		0.005	0.005	Yes
Turbidity	NTU	5		0.2	0.2	Yes
True colour	HU	15		5	5	Yes
pH	pH units	6.5-9.2	Average of test results between 6.5 - 9.2 pH units	7.47	7.53	Yes

Water Quality Zones

Lemon Tree Passage Zone - key 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 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	95th percentile of test results less than respective ADWG health guideline value	0.91	1.00	Yes
Chlorine	mg/L	5		0.62	1.08	Yes
Copper	mg/L	2		0.005	0.013	Yes
Lead	mg/L	0.01		0.000	0.001	Yes
Manganese	mg/L	0.5		0.004	0.009	Yes
Trihalomethanes	mg/L	0.25		0.121	0.121	Yes

Lemon Tree Passage Zone - PFOS, PFHxS & PFOA

Analyte	Units of measure	FSANZ health based guidance value	Performance standard (assessment over previous 12 months)*	% of results < FSANZ guidance value over the last 12 months^	% of results < individual limit of reporting (0.002) over the last 12 months	Met performance standard
PFOS + PFHxS	µg/L	0.07	100% of test results <0.07	100.00%	100.00%	Yes
PFOA	µg/L	0.56	100% of test results <0.56	100.00%	100.00%	Yes

Lemon Tree Passage Zone - 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	Average of test results less than respective ADWG aesthetic guideline value	0.032	0.034	Yes
Aluminium	mg/L	0.2		0.046	0.042	Yes
Copper	mg/L	1		0.005	0.006	Yes
Zinc	mg/L	3		0.003	0.004	Yes
Turbidity	NTU	5		0.2	0.2	Yes
True colour	HU	15		5	5	Yes
pH	pH units	6.5-9.2	Average of test results between 6.5 - 9.2 pH units	7.51	7.55	Yes

Anna Bay / Nelson Bay Zone - key 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 performance standard
E. coli	MPN/100mL	Should not be detected in 100mL	At least 98% of test results <1		98.72%	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	95th percentile of test results less than respective ADWG health guideline value	0.90	1.02	Yes
Chlorine	mg/L	5		0.78	1.17	Yes
Copper	mg/L	2		0.009	0.015	Yes
Lead	mg/L	0.01		0.000	0.000	Yes
Manganese	mg/L	0.5		0.003	0.008	Yes
Trihalomethanes	mg/L	0.25		0.044	0.081	Yes

Anna Bay / Nelson Bay Zone - PFOS, PFHxS & PFOA

Analyte	Units of measure	FSANZ health based guidance value	Performance standard (assessment over previous 12 months)*	% of results < FSANZ guidance value over the last 12 months^	% of results < individual limit of reporting (0.002) over the last 12 months	Met performance standard
PFOS + PFHxS	µg/L	0.07	100% of test results <0.07	100.00%	95.83%	Yes
PFOA	µg/L	0.56	100% of test results <0.56	100.00%	100.00%	Yes

Anna Bay / Nelson Bay Zone - 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	Average of test results less than respective ADWG aesthetic guideline value	0.021	0.025	Yes
Aluminium	mg/L	0.2		0.048	0.045	Yes
Copper	mg/L	1		0.009	0.006	Yes
Zinc	mg/L	3		0.006	0.005	Yes
Turbidity	NTU	5		0.2	0.2	Yes
True colour	HU	15		5	5	Yes
pH	pH units	6.5-9.2	Average of test results between 6.5 - 9.2 pH units	7.51	7.54	Yes

Water Quality Zones

Gresford Zone - key 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 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	0.15	0.94	Yes

Gresford Zone - PFOS, PFHxS & PFOA

Analyte	Units of measure	FSANZ health based guidance value	Performance standard (assessment over previous 12 months)*	% of results < FSANZ guidance value over the last 12 months^	% of results < individual limit of reporting (0.002) over the last 12 months	Met performance standard
PFOS + PFHxS	µg/L	0.07	100% of test results <0.07	100.00%	100.00%	Yes
PFOA	µg/L	0.56	100% of test results <0.56	100.00%	100.00%	Yes

Gresford Zone - 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
pH	pH units	6.5-9.2	Average of test results between 6.5 - 9.2 pH units	7.79	8.07	Yes
Turbidity	NTU	5	Average of test results less than ADWG aesthetic guideline value	0.10	0.13	Yes

* PFOS, PFHxS and PFOA monitoring commenced in August 2016

PFOS, PFHxS and PFOA Results for Hunter Water Source Waters

Analyte	Units of Measure	FSANZ Guidance Value^	Grahamstown WTP	Dungog WTP	Nelson Bay WTP	Anna Bay WTP	Lemon Tree Passage WTP	Gresford WTP
PFOS + PFHxS	µg/L	0.07	0.002	<0.002	<0.002	<0.002	<0.002	<0.002
PFOA	µg/L	0.56	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

^ Food Standards Australia New Zealand (FSANZ) Health Based Guidance Value for drinking water is individual or combined concentrations of PFOS and PFHxS below level of 0.07 µg/L and individual concentration of PFOA below level of 0.56 µg/L.