

Typical Composition of Treated Water - Hunter Water Sources

Parameter	Units	Water Treatment Plant / Source																						
		ADWG 2011		Dungog			Grahamstown			Lemon Tree Passage			Anna Bay			Nelson Bay			Gresford			Central Coast (North)		
		Health	Aesthetic	5th Percentile	Median	95th Percentile	5th Percentile	Median	95th Percentile	5th Percentile	Median	95th Percentile	5th Percentile	Median	95th Percentile	5th Percentile	Median	95th Percentile	5th Percentile	Median	95th Percentile	5th Percentile	Median	95th Percentile
Alkalinity at pH 4.5 as Calcium Carbonate - Note (3)	mg/L			35	38	40	18	22	39	54	55	58	38	41	45	15	22	57	-	-	-	-	-	-
Aluminium	mg/L		0.2	0.032	0.090	0.150	0.020	0.090	0.160	0.010	0.080	0.198	0.017	0.110	0.198	0.010	0.050	0.151	0.005	0.035	0.120	0.030	0.050	0.130
Antimony	mg/L	0.003		<0.001	<0.001	0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	0.001	0.001	0.001
Arsenic	mg/L	0.01		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.001	0.001	0.001	0.001
Barium	mg/L	2		0.008	0.009	0.010	0.012	0.013	0.021	0.010	0.012	0.017	0.014	0.018	0.021	0.010	0.015	0.018	0.006	0.008	0.010	0.018	0.032	0.041
Boron	mg/L	4		0.005	0.009	0.012	0.020	0.025	0.031	0.010	0.014	0.022	0.008	0.012	0.021	0.007	0.011	0.026	0.009	0.013	0.018	0.050	0.050	0.050
Cadmium	mg/L	0.002		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Calcium	mg/L			10	16	19	10	12	21	19	23	25	13	16	19	1	2	14	15	19	22	15	20	24
Chloride	mg/L		250	8	13	16	36	40	45	22	26	30	39	45	48	39	47	48	24	30	36	42	52	64
Chlorine	mg/L	5		0.69	0.92	1.34	0.44	2.16	3.30	0.71	1.13	1.89	0.99	1.15	1.26	0.11	0.62	1.31	0.24	0.66	1.30	-	-	-
Chromium	mg/L	0.05		<0.001	<0.001	0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.001	<0.001	0.001	0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.002	0.003	0.003	0.005
Colour (True)	Hazen Units (HU)		15	2.0	3.4	4.7	2.1	3.5	4.9	3.1	4.0	4.9	0.6	1.8	3.4	0.2	1.4	3.4	4.1	6.2	9.6	0.5	1.0	4.0
Copper	mg/L	2	1	0.001	0.002	0.003	0.001	0.002	0.003	0.000	0.003	0.019	0.000	0.005	0.008	0.001	0.003	0.033	0.003	0.010	0.059	0.005	0.017	0.257
Cyanide	mg/L	0.08		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-
Fluoride	mg/L	1.5		0.94	0.99	1.04	0.95	0.99	1.04	0.94	0.97	1.03	0.94	0.96	1.04	0.94	0.95	1.05	0.11	0.14	0.19	0.83	0.98	1.14
Hardness as Calcium Carbonate - Note (3)	mg/L		Note (1)	32	46	54	44	51	70	57	66	71	44	54	61	14	19	51	62	78	99	52	69	82
Iron	mg/L		0.3	0.010	0.020	0.070	0.010	0.010	0.060	0.010	0.030	0.090	0.010	0.060	0.120	0.003	0.020	0.090	0.010	0.010	0.050	0.005	0.010	0.190
Lead	mg/L	0.01		<0.001	<0.001	0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.001	<0.001	0.001	0.001	<0.001	<0.001	0.001	0.001	0.001	0.009
Magnesium	mg/L			1.2	1.5	1.8	4.1	5.0	5.7	1.6	1.8	2.2	2.9	3.4	3.8	2.9	3.4	4.2	6.2	8.1	10.7	3.6	4.5	5.7
Manganese	mg/L	0.5	0.1	0.001	0.004	0.015	0.001	0.003	0.014	0.001	0.009	0.019	0.001	0.003	0.011	0.001	0.001	0.009	0.001	0.004	0.039	0.003	0.003	0.033
Mercury	mg/L	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Molybdenum	mg/L	0.05		<0.001	<0.001	0.003	<0.001	<0.001	0.003	<0.001	<0.001	0.003	<0.001	<0.001	0.003	<0.001	<0.001	0.003	<0.001	<0.001	0.005	0.003	0.003	0.003
Nickel	mg/L	0.02		<0.001	<0.001	0.003	<0.001	<0.001	0.003	<0.001	<0.001	0.003	<0.001	<0.001	0.003	<0.001	0.001	0.003	<0.001	<0.001	0.005	0.005	0.005	0.005
Nitrate	mg/L	50		0.009	0.058	0.141	0.010	0.033	0.085	0.096	0.140	0.161	0.175	0.545	0.778	0.039	0.076	0.293	0.023	0.055	0.108	0.500	0.500	2.300
Nitrite	mg/L	3		0.001	0.002	0.002	0.001	0.002	0.002	0.001	0.002	0.004	0.001	0.002	0.002	0.001	0.002	0.002	0.002	0.003	0.003	0.050	0.050	0.050
pH - Note (4)	pH units		6.5-9.2	7.4	7.5	7.8	7.3	7.4	7.5	7.3	7.5	7.7	7.3	7.5	7.7	7.3	7.4	7.6	7.4	7.6	8.1	7.2	7.6	8.1
Potassium	mg/L			0.8	1.0	1.3	1.7	2.6	2.8	0.6	0.6	0.8	1.1	1.2	1.6	1.2	1.4	1.7	-	-	-	-	-	-
Selenium	mg/L	0.01		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.001	0.001
Silica as SiO2	mg/L		Note (2)	6.7	12.5	16.1	0.4	1.3	4.7	6.7	7.3	7.8	8.3	9.8	10.4	5.6	8.9	9.8	-	-	-	-	-	-
Silver	mg/L	0.1		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.001	0.001
Sodium	mg/L		180	5	6	7	20	24	27	11	13	15	22	24	27	24	32	48	18	23	28	19	26	34
Sulphate	mg/L		250	6.00	7.0	13.0	24.9	30.5	34.1	3.0	4.0	6.3	7.0	9.0	12.2	7.7	9.0	18.1	3.2	7.5	9.9	15.0	24.0	30.0
Total Dissolved Solids	mg/L		600	80	101	140	133	157	180	111	127	178	135	151	180	114	142	179	102	143	199	124	147	168
Total Phosphorous	mg/L			0.003	0.009	0.021	0.003	0.004	0.015	0.003	0.006	0.019	0.003	0.008	0.019	0.003	0.006	0.018	-	-	-	-	-	-
Total Suspended Solids	mg/L			0.5	0.5	1.8	0.5	0.8	2.0	0.5	0.8	2.5	0.5	0.5	1.8	0.5	0.5	1.0	-	-	-	-	-	-
Turbidity	NTU		5	0.2	0.3	0.5	0.2	0.2	0.3	0.2	0.4	0.5	0.4	0.7	1.2	0.1	0.2	0.4	0.1	0.1	0.3	0.1	0.1	1.3
Zinc	mg/L		3	0.001	0.002	0.005	0.001	0.003	0.004	0.001	0.002	0.008	0.001	0.002	0.007	0.001	0.002	0.048	0.002	0.004	0.007	0.005	0.020	0.120

(1) Contributes to hardness. Combined content should maintain hardness at <200 mg/L as CaCO3.

(2) To minimise scale buildup silica should not exceed 80 mg/L.

(3) Grahamstown Water Treatment Plant treats water from Grahamstown or Tomago sources or a blend of both. Composition varies depending on the source(s) being treated. Typical Alkalinity of water supplied by Grahamstown Water Treatment Plant ranges from 16 to 75 mg/L. Typical Hardness at Grahamstown Water Treatment Plant is 35 to 103 mg/L.

(4) Note that pH within the distribution system (ie at customers' taps) is typically somewhat higher than pH at the water treatment plants