

Drinking Water Quality Annual Report Data 01/07/2010 to 30/06/2011

Table 19 Aesthetic (Non-health related) Variables

Great Southern	Aluminium				Hardness				Iron				Manganese							
	Locality	Concentration (mg/L)			Guideline Met	Samples Taken	Concentration (mg/L)			Guideline Met	Samples Taken	Concentration (mg/L)			Guideline Met	Samples Taken	Concentration (mg/L)			Guideline Met
		Min	Max	Mean			Min	Max	Mean			Min	Max	Mean			Min	Max	Mean	
Albany	17	<0.008	0.016	0.009	✓	17	100	270	206	(1)	17	0.050	0.140	0.096	✓	17	<0.002	<0.002	<0.002	✓
Boddington	2	0.020	0.025	0.023	✓	2	45	50	48	✓	2	0.060	0.260	0.160	✓	2	0.008	0.016	0.012	✓
Borden	2	<0.008	0.030	0.015	✓	2	30	50	40	✓	2	<0.003	0.015	0.008	✓	2	<0.002	<0.002	<0.002	✓
Bremer Bay	3	<0.008	<0.008	<0.008	✓	5	170	200	180	✓	4	<0.003	0.025	0.008	✓	4	<0.002	<0.002	<0.002	✓
Brookton	2	0.014	0.045	0.030	✓	3	55	70	60	✓	3	0.070	0.100	0.087	✓	3	0.003	0.005	0.004	✓
Broomehill	2	0.025	0.025	0.025	✓	2	45	55	50	✓	2	0.100	0.100	0.100	✓	2	0.002	0.003	0.003	✓
Bullaring	3	0.035	0.055	0.043	✓	3	65	65	65	✓	6	0.140	0.280	0.230	✓	3	0.016	0.025	0.019	✓
Cranbrook	2	0.035	0.060	0.048	✓	2	16	19	18	✓	2	0.140	0.220	0.180	✓	2	0.002	0.016	0.009	✓
Cuballing	2	0.014	0.014	0.014	✓	2	40	45	43	✓	6	0.090	0.180	0.122	✓	2	0.003	0.006	0.005	✓
Denmark	4	0.014	0.080	0.033	✓	4	65	80	73	✓	4	0.015	0.020	0.016	✓	4	<0.002	0.006	<0.002	✓
Dudin TWS	2	0.014	0.025	0.020	✓	2	60	60	60	✓	6	0.120	0.180	0.153	✓	2	0.003	0.009	0.006	✓
Dumbleyung	2	0.020	0.025	0.023	✓	2	55	60	58	✓	2	0.070	0.080	0.075	✓	2	0.004	0.005	0.005	✓
Frankland	2	0.012	0.016	0.014	✓	2	11	11	11	✓	2	0.025	0.080	0.053	✓	2	<0.002	<0.002	<0.002	✓
Gnowangerup	2	0.025	0.025	0.025	✓	2	50	60	55	✓	2	0.100	0.120	0.110	✓	2	<0.002	0.003	<0.002	✓
Harrismith TWS	2	0.016	0.020	0.018	✓	2	55	55	55	✓	2	0.120	0.120	0.120	✓	2	0.003	0.025	0.014	✓
Highbury	2	0.014	0.018	0.016	✓	2	40	45	43	✓	6	0.080	0.400	0.173	✓	2	0.005	0.012	0.009	✓
Hopetoun	4	<0.008	<0.008	<0.008	✓	4	65	200	131	✓	4	<0.003	0.015	0.005	✓	4	<0.002	<0.002	<0.002	✓
Hyden	2	0.030	0.040	0.035	✓	2	55	65	60	✓	2	0.030	0.120	0.075	✓	2	<0.002	0.002	<0.002	✓
Jerramungup	2	0.095	0.790	0.443	(2)	2	20	25	23	✓	2	0.060	0.200	0.130	✓	2	<0.002	<0.002	<0.002	✓
Karlgarin	2	0.030	0.030	0.030	✓	2	60	65	63	✓	2	0.040	0.090	0.065	✓	2	<0.002	0.004	<0.002	✓
Katanning	2	0.016	0.018	0.017	✓	2	45	50	48	✓	2	0.100	0.100	0.100	✓	2	0.004	0.004	0.004	✓
Kendenup	6	0.010	0.016	0.012	✓	6	240	280	257	(1)	6	0.045	0.070	0.057	✓	6	<0.002	<0.002	<0.002	✓
Kojonup	2	0.020	0.025	0.023	✓	2	50	60	55	✓	2	0.100	0.160	0.130	✓	2	0.003	0.003	0.003	✓
Kondinin	2	0.030	0.035	0.033	✓	2	60	65	63	✓	2	0.070	0.120	0.095	✓	2	0.006	0.008	0.007	✓
Kukerin	2	0.025	0.030	0.028	✓	2	60	65	63	✓	2	0.030	0.080	0.055	✓	2	0.002	0.003	0.003	✓
Kulin	2	0.014	0.020	0.017	✓	2	55	60	58	✓	2	0.100	0.140	0.120	✓	2	0.003	0.006	0.005	✓
Lake Grace	2	0.018	0.020	0.019	✓	2	60	60	60	✓	2	0.035	0.070	0.053	✓	2	0.003	0.003	0.003	✓
Lake King	2	0.014	0.014	0.014	✓	2	50	55	53	✓	2	0.020	0.060	0.040	✓	2	<0.002	0.007	0.004	✓
Mt Barker	4	0.008	0.014	0.011	✓	4	220	270	253	(1)	4	0.060	0.120	0.088	✓	4	<0.002	<0.002	<0.002	✓
Munglinup	2	0.016	0.020	0.018	✓	2	14	15	15	✓	2	0.035	0.080	0.058	✓	2	<0.002	0.004	<0.002	✓
Muradup	2	0.025	0.025	0.025	✓	2	50	55	53	✓	2	0.100	0.140	0.120	✓	2	0.002	0.004	0.003	✓
Narrikup	5	0.010	0.012	0.010	✓	11	220	270	245	(1)	11	0.045	0.120	0.092	✓	8	<0.002	<0.002	<0.002	✓
Narrogin	2	0.018	0.018	0.018	✓	2	40	45	43	✓	2	0.140	0.160	0.150	✓	2	0.008	0.009	0.009	✓
Newdegate	2	0.030	0.075	0.053	✓	2	50	55	53	✓	2	0.050	0.070	0.060	✓	2	<0.002	0.002	<0.002	✓
Nyabing	4	0.010	0.020	0.016	✓	4	20	50	41	✓	4	0.100	0.140	0.125	✓	4	<0.002	0.010	0.004	✓
Ongerup	2	0.050	0.120	0.085	✓	2	15	35	25	✓	2	0.010	0.045	0.028	✓	2	<0.002	<0.002	<0.002	✓
Pingaring	2	0.012	0.030	0.021	✓	2	55	65	60	✓	2	0.045	0.050	0.048	✓	2	<0.002	<0.002	<0.002	✓
Pingelly	2	0.025	0.040	0.033	✓	2	50	55	53	✓	2	0.260	0.280	0.270	✓	2	0.005	0.030	0.018	✓
Pingrup	2	0.014	0.045	0.030	✓	2	45	60	53	✓	2	0.090	0.140	0.115	✓	2	0.003	0.020	0.012	✓
Popanyinning	2	0.018	0.025	0.022	✓	2	45	50	48	✓	2	0.140	0.180	0.160	✓	2	0.008	0.012	0.010	✓
Ravensthorpe	3	0.050	0.100	0.075	✓	3	25	85	50	✓	3	0.030	0.240	0.130	✓	3	0.003	0.004	0.004	✓
Rocky Gully	2	0.018	0.025	0.022	✓	2	14	250	132	✓	6	0.050	0.070	0.062	✓	2	<0.002	<0.002	<0.002	✓
Tambellup	2	0.040	0.040	0.040	✓	2	55	60	58	✓	2	0.120	0.120	0.120	✓	2	0.003	0.003	0.003	✓
Tincurrin TWS	2	0.035	0.045	0.040	✓	2	55	55	55	✓	6	0.160	0.420	0.267	✓	2	0.004	0.040	0.022	✓
Varley	2	0.030	0.040	0.035	✓	2	17	17	17	✓	2	0.080	0.120	0.100	✓	2	0.002	0.003	0.003	✓
Wagin	2	0.014	0.020	0.017	✓	2	45	50	48	✓	2	0.120	0.140	0.130	✓	2	0.008	0.009	0.009	✓
Wandering	2	0.020	0.025	0.023	✓	2	45	50	48	✓	2	0.090	0.100	0.095	✓	2	0.008	0.012	0.010	✓
Wickepin TWS	2	0.020	0.025	0.023	✓	2	45	50	48	✓	2	0.140	0.160	0.150	✓	2	0.007	0.014	0.011	✓
Williams	2	0.016	0.016	0.016	✓	2	35	45	40	✓	2	0.030	0.050	0.040	✓	2	0.006	0.012	0.009	✓
Woodanilling	2	0.018	0.035	0.027	✓	2	45	45	45	✓	2	0.100	0.220	0.160	✓	2	0.007	0.030	0.019	✓
Yealering	2	0.018	0.020	0.019	✓	2	50	55	53	✓	2	0.100	0.100	0.100	✓	2	0.002	0.003	0.003	✓

(1) Elevated hardness is characteristic of the source supplying this locality. (2) Aluminium originates from the addition of alum for water treatment purposes.

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Table 20 Aesthetic (Non-health related) Variables

Great Southern	Aesthetic (Non-health related) Variables																			
	Locality	Samples Taken	pH				Samples Taken	TDS			Samples Taken	True Colour				Samples Taken	Turbidity			
			Min	Max	Mean	Guideline Met		Min	Max	Mean		Guideline Met	Min	Max	Mean		Guideline Met	Min	Max	Mean
Albany	17	7.54	8.04	7.77	✓	17	442	599	536	(2)	17	<1	2	<1	✓	17	0.2	0.9	0.4	✓
Boddington	2	7.54	7.55	7.55	✓	2	191	226	209	✓	2	<1	<1	<1	✓	2	0.2	0.5	0.4	✓
Borden	2	7.52	7.72	7.62	✓	2	112	163	138	✓	2	<1	<1	<1	✓	2	<0.1	<0.1	<0.1	✓
Bremer Bay	5	8.18	8.33	8.26	✓	4	843	909	867	(2)	4	<1	<1	<1	✓	4	<0.1	0.2	<0.1	✓
Brookton	3	7.54	7.94	7.79	✓	3	208	349	256	✓	3	<1	2	<1	✓	3	0.3	0.4	0.3	✓
Broomehill	2	7.51	7.75	7.63	✓	2	197	243	220	✓	2	2	2	2	✓	2	0.4	0.7	0.6	✓
Bullaring	6	7.22	7.91	7.47	✓	2	231	242	237	✓	2	<1	<1	<1	✓	2	0.9	1.4	1.2	✓
Cranbrook	2	6.81	6.84	6.83	✓	2	58	80	69	✓	2	<1	7	4	✓	2	1.2	4	2.6	✓
Cuballing	2	7.12	7.27	7.20	✓	2	194	214	204	✓	2	<1	2	<1	✓	2	0.5	0.6	0.6	✓
Denmark	4	7.09	9.01	7.89	✓	4	487	565	521	(2)	4	<1	<1	<1	✓	4	<0.1	<0.1	<0.1	✓
Dudin TWS	6	8.06	8.95	8.63	(1)	2	221	233	227	✓	2	<1	2	<1	✓	2	0.3	0.5	0.4	✓
Dumbleyung	2	7.97	8.25	8.11	✓	2	217	240	229	✓	2	1	2	2	✓	2	0.2	0.2	0.2	✓
Frankland	2	6.63	6.79	6.71	✓	2	44	46	45	✓	2	1	4	3	✓	2	0.3	0.5	0.4	✓
Gnowangerup	2	7.43	7.48	7.46	✓	2	201	231	216	✓	2	2	3	3	✓	2	0.5	0.7	0.6	✓
Harrismith TWS	2	7.84	8.96	8.40	✓	2	213	224	219	✓	2	<1	3	2	✓	2	0.4	0.6	0.5	✓
Highbury	2	7.14	7.14	7.14	✓	2	192	214	203	✓	2	<1	2	<1	✓	2	0.7	0.8	0.8	✓
Hopetoun	4	6.41	7.91	7.24	✓	4	511	736	633	(2)	4	<1	<1	<1	✓	4	<0.1	0.4	<0.1	✓
Hyden	2	7.46	7.70	7.58	✓	2	218	244	231	✓	2	<1	1	<1	✓	2	0.2	0.9	0.6	✓
Jerramungup	2	6.88	7.28	7.08	✓	2	104	123	114	✓	2	<1	<1	<1	✓	2	0.2	2.2	1.2	✓
Karlgarin	2	7.68	7.69	7.69	✓	2	234	248	241	✓	2	<1	<1	<1	✓	2	0.4	0.8	0.6	✓
Katanning	2	7.27	7.31	7.29	✓	2	187	221	204	✓	2	2	2	2	✓	2	0.4	0.7	0.6	✓
Kendenup	5	8.06	8.16	8.14	✓	5	567	595	579	(2)	5	<1	<1	<1	✓	5	0.2	0.2	0.2	✓
Kojonup	2	7.71	7.72	7.72	✓	2	207	245	226	✓	2	2	3	3	✓	2	0.4	0.5	0.5	✓
Kondinin	2	7.74	8.07	7.91	✓	2	228	253	241	✓	2	1	2	2	✓	2	0.5	0.8	0.7	✓
Kukerin	2	8.20	8.47	8.34	✓	2	226	239	233	✓	2	<1	<1	<1	✓	2	<0.1	0.1	<0.1	✓
Kulin	2	8.99	9.12	9.06	(1)	2	217	248	233	✓	2	2	2	2	✓	2	0.3	0.5	0.4	✓
Lake Grace	2	7.96	8.17	8.07	✓	2	222	230	226	✓	2	<1	1	<1	✓	2	0.2	0.2	0.2	✓
Lake King	2	7.17	7.23	7.20	✓	2	255	276	266	✓	2	<1	<1	<1	✓	6	0.3	2.4	1	✓
Mt Barker	4	7.81	8.01	7.91	✓	4	545	596	577	(2)	4	<1	<1	<1	✓	4	0.3	0.4	0.4	✓
Munglinup	2	6.57	7.43	7.00	✓	2	73	79	76	✓	2	<1	<1	<1	✓	2	0.9	1.4	1.2	✓
Muradup	2	7.58	7.58	7.58	✓	2	207	255	231	✓	2	1	2	2	✓	2	0.4	0.5	0.5	✓
Narrikup	6	7.71	7.89	7.81	✓	6	546	623	571	(2)	6	<1	<1	<1	✓	6	0.2	0.5	0.4	✓
Narrogin	2	7.11	7.28	7.20	✓	2	197	220	209	✓	2	2	2	2	✓	2	0.6	0.7	0.7	✓
Newdegate	2	7.75	7.81	7.78	✓	2	186	223	205	✓	2	<1	1	<1	✓	2	0.2	0.6	0.4	✓
Nyabing	4	6.38	7.40	7.10	✓	4	92	226	183	✓	4	<1	2	<1	✓	4	0.4	0.8	0.7	✓
Ongerup	2	6.81	7.43	7.12	✓	2	70	150	110	✓	2	<1	<1	<1	✓	2	0.1	1	0.6	✓
Pingaring	2	7.46	8.82	8.14	✓	2	215	245	230	✓	2	<1	<1	<1	✓	2	0.1	0.1	0.1	✓
Pingelly	2	7.60	7.71	7.66	✓	2	216	220	218	✓	2	2	3	3	✓	2	0.6	1.6	1.1	✓
Pingrup	2	7.15	8.08	7.62	✓	2	203	250	227	✓	2	<1	2	<1	✓	2	0.4	0.9	0.7	✓
Popanyinning	2	7.56	8.00	7.78	✓	2	216	230	223	✓	2	<1	2	<1	✓	2	0.4	0.7	0.6	✓
Ravensthorpe	3	7.16	7.73	7.39	✓	3	145	332	222	✓	3	<1	4	3	✓	3	0.8	3.1	2.3	✓
Rocky Gully	2	5.35	8.31	6.83	✓	2	57	567	312	✓	2	<1	1	<1	✓	2	0.3	1	0.7	✓
Tambellup	2	7.68	7.88	7.78	✓	2	209	229	219	✓	2	2	3	3	✓	2	0.5	0.9	0.7	✓
Tincurrin TWS	2	7.52	7.64	7.58	✓	2	222	235	229	✓	2	2	2	2	✓	2	0.8	2	1.4	✓
Varley	2	6.86	6.98	6.92	✓	2	49	50	50	✓	2	1	8	5	✓	2	0.8	1	0.9	✓
Wagin	2	7.13	7.60	7.37	✓	2	201	220	211	✓	2	<1	3	2	✓	2	0.4	0.6	0.5	✓
Wandering	2	7.77	7.82	7.80	✓	2	190	231	211	✓	2	<1	2	<1	✓	2	0.3	0.4	0.4	✓
Wickepin TWS	2	7.42	7.53	7.48	✓	2	198	229	214	✓	2	2	3	3	✓	2	0.5	0.6	0.6	✓
Williams	2	7.08	7.16	7.12	✓	2	183	218	201	✓	2	<1	<1	<1	✓	2	0.3	0.3	0.3	✓
Woodanilling	2	7.30	7.38	7.34	✓	2	202	211	207	✓	2	2	2	2	✓	2	0.6	0.7	0.7	✓
Yealering	2	8.86	8.95	8.91	(1)	2	214	241	228	✓	2	1	2	2	✓	2	0.3	0.4	0.4	✓

(1) Elevated pH is caused by leaching of calcium carbonate from the protective cement lining of the pipes after long water transit times. This characteristic is found in a number of our localities on our large water supply schemes. Experience shows that pH at this level is not objectionable to our customers. (2) Elevated TDS is characteristic of the source supplying this locality.