

Water quality objectives to protect the aquatic ecosystem environmental values for Alluvial groundwater aquifer zones in the Queensland Murray-Darling Basin.

Zone	Percentile	Notes: 1. The ANZECC Guidelines (ANZECC/ARMCANZ, 2000) recommend that the highest level of protection should be provided to underground aquatic ecosystems, given their high conservation value. The management intent is to maintain the existing water quality distribution (20th, 50th and 80th percentiles). 2. ID: Insufficient data. 3. 'Near stream' refers to a 1.5km buffered area around the stream.																											
		Na		Ca		Mg		HCO ₃		Cl		SO ₄		NO ₃		Electrical Conductivity (µS/cm)	Hardness (mg/L)	pH	Alkalinity (mg/L)	SiO ₂ (mg/L)	F (mg/L)	Fe (mg/L)	Mn (mg/L)	Zn (mg/L)	Cu (mg/L)	SAR (meq/L)	Total Nitrogen mg/L	Total Phosphorous mg/L	
		mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%														
s1. Alluvial																													
1. Southern Condamine	20th	44	22	36	17	27	27	281	49	56	18	0.5	0	0.00	0	680	217	7.5	245.0	28.0	0.10	0.005	0.000	0.005	0.010	1.00	0.000	0.000	
	50th	78	33	55	27	49	36	428	69	103	29	4.7	1	1.00	0	990	350	7.9	365.0	36.0	0.20	0.010	0.010	0.005	0.015	1.80	0.207	0.033	
	80th	156	51	84	36	80	47	592	81	245	47	15.0	2	8.50	1	1480	522	8.2	500.0	44.0	0.25	0.050	0.293	0.010	0.015	3.80	1.804	0.225	
1. Southern Condamine near stream	20th	43	21	38	17	28	27	291	50	54	17	0.5	0	0.00	0	689	228	7.5	254.0	28.0	0.10	0.005	0.000	0.005	0.010	1.00	0.000	0.000	
	50th	75	32	56	28	50	36	433	71	97	28	4.2	1	0.90	0	981	353	7.9	373.0	36.0	0.20	0.010	0.010	0.005	0.015	1.70	0.196	0.033	
	80th	150	49	84	36	77	47	589	82	225	46	13.0	2	8.00	1	1400	508	8.2	499.0	44.0	0.24	0.040	0.309	0.011	0.015	3.60	1.739	0.229	
2. Central Condamine	20th	85	54	19	7	13	12	239	24	70	28	5.0	1	0.20	0	603	110	7.4	200.0	27.0	0.10	0.005	0.005	0.005	0.015	3.20	0.043	0.000	
	50th	213	71	34	12	24	16	382	54	170	40	22.0	4	0.50	0	1160	183	7.9	321.0	33.0	0.16	0.010	0.010	0.005	0.015	7.30	0.109	0.033	
	80th	535	80	61	23	54	25	465	69	739	72	84.7	7	2.00	0	2800	364	8.3	390.0	40.0	0.30	0.050	0.050	0.010	0.015	12.80	0.435	0.154	
2. Central Condamine near stream	20th	63	42	18	8	14	13	210	42	64	27	4.2	1	0.25	0	580	107	7.3	173.9	24.0	0.10	0.005	0.005	0.005	0.015	2.10	0.053	0.000	
	50th	134	64	32	16	23	20	352	61	120	37	12.5	3	0.50	0	890	179	7.9	291.0	32.0	0.15	0.010	0.010	0.005	0.015	4.50	0.109	0.033	

Draft Water Quality Objectives for Queensland Murray-Darling Basin – Alluvial Aquifer Zones

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		mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%														
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	80th	316	78	50	28	36	29	445	71	285	57	58.0	7	2.50	0	1675	264	8.3	375.0	38.0	0.30	0.103	0.150	0.010	0.015	10.15	0.543	0.163	
3. North Branch	20th	83	46	27	15	17	17	280	59	54	20	4.0	1	0.00	0	660	146	7.5	240.0	28.0	0.10	0.005	0.005	0.005	0.015	2.50	0.000	0.000	
	50th	105	55	37	21	26	23	380	71	80	26	9.6	2	0.50	0	805	203	7.9	320.0	36.0	0.10	0.010	0.010	0.005	0.015	3.30	0.109	0.033	
	80th	158	66	52	28	34	28	451	77	136	38	26.0	5	1.00	0	1050	256	8.3	376.0	40.0	0.20	0.030	0.010	0.010	0.015	4.90	0.217	0.098	
3. North Branch near stream	20th	66	40	26	18	15	17	235	60	51	21	2.2	1	0.00	0	603	134	7.5	201.5	27.0	0.10	0.005	0.004	0.001	0.010	2.10	0.020	0.000	
	50th	92	53	36	24	20	22	332	72	70	27	5.6	2	0.50	0	720	175	7.9	277.0	34.0	0.10	0.010	0.010	0.005	0.015	3.00	0.109	0.098	
	80th	123	63	64	32	33	28	432	78	119	39	12.0	3	1.20	0	987	264	8.2	364.0	40.0	0.25	0.030	0.010	0.005	0.015	4.00	0.241	0.154	
4. Hodgson	20th	381	65	31	5	47	15	353	9	400	47	65.8	6	0.50	0	1927	295	7.4	307.2	20.0	0.15	0.005	0.005	0.005	0.015	8.10	0.109	0.000	
	50th	617	73	59	8	83	20	458	25	818	66	198.5	9	1.80	0	3575	479	7.8	392.5	27.5	0.20	0.010	0.010	0.005	0.015	13.10	0.391	0.000	
	80th	1176	79	107	11	181	24	567	41	1890	80	440.7	15	5.00	0	7049	918	8.3	518.6	32.1	0.50	0.050	0.050	0.020	0.035	18.60	1.087	0.065	
5. Oakey	20th	313	71	23	5	31	11	358	15	279	41	33.5	3	0.50	0	1800	198	7.6	300.5	24.0	0.10	0.005	0.000	0.005	0.015	9.31	0.109	0.000	
	50th	490	77	38	7	50	16	450	28	631	65	86.0	6	1.25	0	2750	304	8.0	375.0	29.0	0.20	0.010	0.010	0.005	0.015	12.90	0.304	0.000	

Draft Water Quality Objectives for Queensland Murray-Darling Basin – Alluvial Aquifer Zones

Zone	Percentile	Notes: 1. The ANZECC Guidelines (ANZECC/ARMCANZ, 2000) recommend that the highest level of protection should be provided to underground aquatic ecosystems, given their high conservation value. The management intent is to maintain the existing water quality distribution (20th, 50th and 80th percentiles). 2. ID: Insufficient data. 3. 'Near stream' refers to a 1.5km buffered area around the stream.																											
		Na		Ca		Mg		HCO ₃		Cl		SO ₄		NO ₃		Electrical Conductivity (µS/cm)	Hardness (mg/L)	pH	Alkalinity (mg/L)	SiO ₂ (mg/L)	F (mg/L)	Fe (mg/L)	Mn (mg/L)	Zn (mg/L)	Cu (mg/L)	SAR (meq/L)	Total Nitrogen mg/L	Total Phosphorous mg/L	
		mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%														
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	80th	782	83	79	9	96	20	600	52	1201	79	165.0	9	3.97	0	4400	586	8.4	515.5	35.0	0.40	0.050	0.020	0.005	0.015	16.49	1.017	0.033	
5. Oakey near stream	20th	228	68	19	5	22	10	360	23	217	46	20.6	2	0.06	0	1150	149	7.5	298.6	25.1	0.10	0.000	0.000	0.002	0.015	7.57	0.013	0.000	
	50th	380	76	37	8	49	16	455	31	550	61	74.5	7	1.33	0	2378	301	8.0	379.5	32.0	0.20	0.010	0.005	0.005	0.015	10.87	0.288	0.016	
	80th	620	84	59	14	68	20	511	46	757	71	143.7	10	3.00	0	3410	394	8.3	443.0	37.0	0.30	0.067	0.020	0.005	0.015	15.42	0.652	0.033	
6. Myall	20th	265	67	30	6	34	11	382	23	305	49	15.7	2	0.23	0	1629	215	7.5	330.0	24.0	0.10	0.000	0.005	ID	ID	7.28	0.109	ID	
	50th	359	72	44	10	45	18	454	35	472	62	42.8	4	0.60	0	2150	294	8.0	382.0	28.0	0.20	0.020	0.020	ID	ID	9.40	0.207	ID	
	80th	593	81	63	13	66	22	560	47	791	72	73.4	6	4.00	0	3150	427	8.4	468.3	32.0	0.40	0.031	0.070	ID	ID	14.32	0.957	ID	
6. Myall near stream	20th	403	72	31	5	34	10	352	19	407	55	39.3	3	0.00	0	1970	213	7.5	318.2	22.3	0.18	0.000	0.000	ID	ID	10.94	0.083	ID	
	50th	570	79	41	8	45	13	459	24	784	71	60.0	5	0.50	0	3080	269	8.0	385.0	27.8	0.30	0.020	0.020	ID	ID	13.70	0.109	ID	
	80th	814	84	74	11	87	17	619	44	1213	75	117.1	6	3.41	0	3995	527	8.5	555.2	32.7	0.40	0.033	0.070	ID	ID	16.58	0.865	ID	
7. Northwest Condamine	20th	489	65	34	5	35	11	332	8	577	60	36.5	2	0.10	0	2400	274	7.4	309.1	25.0	0.20	0.005	0.009	0.005	0.015	9.90	0.020	0.000	
	50th	830	76	82	9	92	16	462	15	1380	80	120.0	5	1.30	0	4740	582	7.8	394.5	37.0	0.40	0.020	0.050	0.010	0.030	15.30	0.283	0.000	

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		Na		Ca		Mg		HCO ₃		Cl		SO ₄		NO ₃		Electrical Conductivity (µS/cm)	Hardness (mg/L)	pH	Alkalinity (mg/L)	SiO ₂ (mg/L)	F (mg/L)	Fe (mg/L)	Mn (mg/L)	Zn (mg/L)	Cu (mg/L)	SAR (meq/L)	Total Nitrogen mg/L	Total Phosphorous mg/L
		mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%													
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	80th	1549	81	180	17	208	21	575	33	3079	88	180.5	7	5.00	0	9200	1260	8.2	487.7	49.0	0.60	0.070	0.243	0.025	0.075	19.99	1.176	0.033
7. Northwest Condamine near stream	20th	258	53	20	5	19	10	255	6	195	43	8.0	1	0.48	0	1380	135	7.3	221.0	18.6	0.23	ID	ID	ID	ID	5.03	0.103	ID
	50th	544	77	42	8	41	16	477	24	680	71	19.5	2	5.55	0	2600	321	7.9	405.0	26.0	0.53	ID	ID	ID	ID	11.94	1.207	ID
	80th	1795	84	145	22	196	27	554	55	3432	90	216.3	4	11.20	1	11050	1093	8.3	509.0	49.6	0.83	ID	ID	ID	ID	22.95	2.435	ID
8. Lower Condamine	20th	110	65	9	3	10	8	152	7	96	45	9.9	2	0.10	0	625	65	7.3	133.0	13.0	0.15	0.005	0.000	ID	ID	4.70	0.028	ID
	50th	586	79	40	7	37	14	330	17	608	77	54.5	5	0.50	0	2700	256	7.8	276.0	33.0	0.30	0.100	0.040	ID	ID	18.10	0.109	ID
	80th	1889	87	130	14	164	21	616	44	2930	87	220.5	8	4.01	0	9910	997	8.2	511.5	57.3	0.80	0.630	0.295	ID	ID	28.70	0.274	ID
8. Lower Condamine near stream	20th	74	61	10	4	10	8	136	5	77	45	13.7	3	0.11	0	563	77	7.2	116.0	13.0	0.10	0.019	0.000	ID	ID	4.00	0.020	ID
	50th	320	74	38	8	31	16	307	18	450	73	58.5	5	0.50	0	1950	230	7.8	256.5	30.0	0.30	0.100	0.053	ID	ID	13.25	0.087	ID
	80th	1926	86	128	16	185	22	464	47	3300	88	228.7	9	4.46	1	10440	1094	8.1	398.0	61.0	0.70	0.960	0.295	ID	ID	28.12	0.191	ID
9. Woolloowins	20th	134	38	37	10	43	19	275	20	255	49	6.6	1	0.50	0	1400	297	7.5	238.8	28.0	0.19	0.005	0.000	0.005	0.010	2.80	0.109	0.000
	50th	250	51	72	17	76	30	405	33	470	64	14.0	1	2.20	0	2047	495	7.9	340.0	36.0	0.27	0.020	0.010	0.005	0.015	5.00	0.478	0.000

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		Na		Ca		Mg		HCO ₃		Cl		SO ₄		NO ₃		Electrical Conductivity (µS/cm)	Hardness (mg/L)	pH	Alkalinity (mg/L)	SiO ₂ (mg/L)	F (mg/L)	Fe (mg/L)	Mn (mg/L)	Zn (mg/L)	Cu (mg/L)	SAR (meq/L)	Total Nitrogen mg/L	Total Phosphorous mg/L
		mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%													
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	80th	413	68	125	26	120	38	574	48	881	77	39.0	3	6.60	1	3000	780	8.2	481.0	44.0	0.40	0.050	0.020	0.013	0.015	8.55	1.174	0.033
9. Woolloowins near stream	20th	155	38	37	9	51	23	240	17	299	53	7.8	1	0.50	0	1350	328	7.6	203.0	28.0	0.18	0.003	0.000	0.005	0.015	3.00	0.109	0.000
	50th	262	48	82	18	99	32	391	27	600	70	15.0	1	2.30	0	2270	634	7.9	326.5	36.0	0.25	0.020	0.010	0.005	0.015	4.80	0.500	0.000
	80th	399	65	146	27	145	37	570	44	1023	81	33.0	3	6.60	0	3456	921	8.2	475.7	43.0	0.40	0.070	0.020	0.010	0.015	7.80	1.304	0.033
10. Upper Balonne	20th	611	66	71	9	45	9	169	2	942	68	78.8	3	0.00	0	3442	360	6.7	141.2	30.0	0.21	0.000	0.050	0.002	0.000	16.70	ID	ID
	50th	1530	78	172	11	124	15	392	5	2610	85	414.0	11	1.25	0	8380	943	7.4	323.0	51.5	0.24	0.025	0.277	0.061	0.017	22.00	ID	ID
	80th	3823	82	553	13	360	18	453	27	6876	86	1292.0	12	5.00	0	21150	2853	7.9	378.8	58.0	0.44	0.030	1.470	0.097	0.019	31.00	ID	ID
10. Upper Balonne near stream	20th	505	65	46	7	20	6	154	1	510	59	24.8	2	0.00	0	2567	182	6.6	126.4	29.7	0.20	0.000	0.010	0.004	0.007	11.67	ID	ID
	50th	3490	74	525	12	336	18	392	5	6000	85	1050.0	7	1.25	0	19300	2690	7.4	323.0	40.5	0.32	0.025	1.250	0.088	0.017	29.00	ID	ID
	80th	3952	84	564	13	363	18	481	38	6945	91	1372.0	13	5.63	0	21590	2898	7.9	398.3	72.0	0.56	0.156	1.672	0.097	0.051	31.90	ID	ID
11. Border Rivers	20th	150	57	13	4	10	6	110	2	117	36	15.1	3	0.27	0	531	78	6.5	104.4	31.0	0.16	0.000	0.005	0.005	0.013	4.95	0.085	0.000
	50th	329	75	34	11	23	14	253	28	381	64	64.5	7	1.90	0	1800	169	7.3	214.0	60.0	0.30	0.010	0.040	0.020	0.015	17.00	0.543	0.049
	80th	4589	89	710	19	569	22	489	57	8723	90	1100.0	10	12.50	0	23910	4399	8.0	413.8	81.0	0.90	0.056	9.740	0.160	0.070	35.70	2.717	1.235
11. Border Rivers near	20th	71	46	13	5	9	6	126	9	69	30	16.2	5	0.00	0	331	70	7.0	123.8	35.9	0.18	0.000	0.009	0.020	0.005	2.83	0.060	ID

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		mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%													
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stream	50th	235	65	24	13	17	18	257	34	180	42	53.5	8	1.30	0	820	125	7.5	220.0	55.0	0.25	0.008	0.105	0.070	0.015	9.20	0.913	ID
	80th	1893	89	430	28	334	27	514	64	3871	81	808.1	14	12.50	1	14150	2423	8.0	422.9	71.7	0.69	0.041	5.240	0.160	0.073	21.52	2.717	ID
12. Upper Maranoa	Insufficient Data																											
13. Upper Dumaresq	20th	58	49	18	18	9	15	140	38	42	22	4.9	2	0.00	0	504	83	7.1	115.0	20.3	0.30	0.000	0.000	0.000	0.012	2.29	0.000	0.000
	50th	112	59	33	23	16	18	248	63	86	33	15.5	4	0.50	0	843	153	7.7	207.0	34.0	0.50	0.010	0.020	0.010	0.015	3.91	0.109	0.000
	80th	147	66	58	29	27	22	412	73	152	53	34.0	8	2.26	1	1104	250	8.1	343.4	46.7	0.60	0.050	0.130	0.020	0.080	4.50	0.491	0.000
13. Upper Dumaresq near stream	20th	58	49	18	18	9	15	140	38	41	22	4.9	2	0.00	0	498	83	7.1	115.0	20.1	0.30	0.000	0.000	0.000	0.012	2.29	0.000	0.000
	50th	112	59	32	23	16	18	249	63	86	33	15.5	4	0.50	0	833	151	7.7	207.0	34.0	0.50	0.010	0.020	0.010	0.015	3.91	0.109	0.000
	80th	147	66	58	29	27	22	416	73	151	52	32.5	7	2.17	1	1103	250	8.1	349.2	46.0	0.60	0.050	0.130	0.020	0.080	4.47	0.472	0.000
14. Macintyre Brook	20th	44	47	3	2	1	2	145	32	46	27	1.1	1	0.03	0	410	16	7.5	132.3	10.3	0.20	0.005	0.005	ID	ID	1.80	ID	ID
	50th	124	91	19	14	11	20	295	54	115	34	7.9	3	0.80	0	1178	76	7.9	243.3	39.5	0.41	0.005	0.005	ID	ID	8.92	ID	ID
	80th	412	97	32	26	28	27	610	68	270	56	30.2	6	6.40	1	1700	203	8.6	558.8	43.7	0.89	0.121	0.834	ID	ID	31.59	ID	ID
14. Macintyre	20th	44	47	4	3	1	3	162	32	45	29	1.3	1	0.07	0	412	17	7.4	132.9	10.9	0.20	0.005	0.005	ID	ID	1.80	ID	ID

Draft Water Quality Objectives for Queensland Murray-Darling Basin – Alluvial Aquifer Zones

Zone	Percentile	Notes: 1. The ANZECC Guidelines (ANZECC/ARMCANZ, 2000) recommend that the highest level of protection should be provided to underground aquatic ecosystems, given their high conservation value. The management intent is to maintain the existing water quality distribution (20th, 50th and 80th percentiles). 2. ID: Insufficient data. 3. 'Near stream' refers to a 1.5km buffered area around the stream.																										
		Na		Ca		Mg		HCO ₃		Cl		SO ₄		NO ₃		Electrical Conductivity (µS/cm)	Hardness (mg/L)	pH	Alkalinity (mg/L)	SiO ₂ (mg/L)	F (mg/L)	Fe (mg/L)	Mn (mg/L)	Zn (mg/L)	Cu (mg/L)	SAR (meq/L)	Total Nitrogen mg/L	Total Phosphorous mg/L
		mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%													
s1. Alluvial																												
Brook near stream	50th	113	91	20	18	14	20	295	53	102	34	6.5	3	0.53	0	1178	111	7.8	243.3	39.5	0.41	0.005	0.013	ID	ID	8.92	ID	ID
	80th	333	94	35	26	39	27	610	67	270	53	30.8	6	6.40	1	1700	266	8.5	503.0	44.6	0.87	0.154	0.838	ID	ID	28.88	ID	ID
15. Lower Maranoa	20th	87	59	18	7	12	10	164	7	69	32	17.3	5	0.00	0	528	93	7.0	150.3	33.0	0.13	0.000	0.001	0.005	0.010	4.10	0.016	ID
	50th	349	76	32	12	27	13	205	31	416	67	83.8	10	0.50	0	1528	199	7.9	183.0	52.0	0.20	0.005	0.005	0.005	0.015	11.00	0.054	ID
	80th	777	83	95	16	70	22	256	60	1258	81	234.7	12	2.50	0	4403	521	8.3	216.9	69.3	0.31	0.005	0.118	0.010	0.015	15.00	0.543	ID
15. Lower Maranoa near stream	20th	65	54	19	11	13	12	166	7	65	26	10.9	5	0.00	0	339	115	6.9	142.2	51.0	0.11	0.000	0.001	0.000	0.001	2.71	0.016	ID
	50th	255	74	45	12	41	14	206	40	231	47	51.0	10	0.25	0	1580	273	7.6	170.5	54.0	0.18	0.005	0.005	0.005	0.015	8.05	0.054	ID
	80th	932	76	130	20	81	26	311	69	1545	82	266.2	11	2.50	0	4740	659	8.2	260.2	74.4	0.22	0.005	0.188	0.010	0.015	15.55	0.543	ID
16. Lower Balonne	20th	154	78	9	5	7	6	153	9	79	38	19.5	6	0.25	0	822	49	7.0	165.6	36.7	0.10	0.000	0.000	0.005	0.010	6.70	0.038	0.000
	50th	677	83	38	7	27	9	258	42	888	75	184.5	10	2.50	0	3460	203	7.9	230.0	50.5	0.23	0.005	0.005	0.010	0.015	20.00	0.652	0.000
	80th	1287	89	109	10	78	12	519	53	1828	80	372.4	12	6.00	1	5705	606	8.3	458.7	65.0	0.39	0.020	0.050	0.010	0.015	25.52	2.717	0.000
16. Lower Balonne near stream	20th	282	78	8	3	6	4	323	25	174	38	30.9	6	0.25	0	1105	45	7.7	291.4	52.3	0.29	0.000	0.000	0.003	0.005	11.31	0.054	ID
	50th	410	87	41	5	32	7	560	39	511	54	98.0	7	4.80	0	2140	231	8.2	482.0	65.0	0.38	0.005	0.005	0.010	0.013	18.15	1.043	ID

Draft Water Quality Objectives for Queensland Murray-Darling Basin – Alluvial Aquifer Zones

Zone	Percentile	Notes: 1. The ANZECC Guidelines (ANZECC/ARMCANZ, 2000) recommend that the highest level of protection should be provided to underground aquatic ecosystems, given their high conservation value. The management intent is to maintain the existing water quality distribution (20th, 50th and 80th percentiles). 2. ID: Insufficient data. 3. 'Near stream' refers to a 1.5km buffered area around the stream.																										
		Na		Ca		Mg		HCO ₃		Cl		SO ₄		NO ₃		Electrical Conductivity (µS/cm)	Hardness (mg/L)	pH	Alkalinity (mg/L)	SiO ₂ (mg/L)	F (mg/L)	Fe (mg/L)	Mn (mg/L)	Zn (mg/L)	Cu (mg/L)	SAR (meq/L)	Total Nitrogen mg/L	Total Phosphorous mg/L
		mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%													
s1. Alluvial																												
	80th	909	93	69	10	49	12	860	52	1040	63	161.4	9	13.85	1	4259	386	8.4	709.1	72.0	0.59	0.068	0.017	0.010	0.015	24.76	3.011	ID
17. Moonie	20th	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	26460	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
	50th	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	46150	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
	80th	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	56280	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
18. Wallam	20th	161	66	21	7	13	8	0	15	162	42	27.7	4	0.00	0	0	106	7.1	179.8	ID	0.18	ID	ID	ID	ID	6.04	ID	ID
	50th	281	77	38	10	27	13	264	41	236	52	65.4	9	0.00	0	1100	204	7.4	329.5	ID	0.30	ID	ID	ID	ID	11.35	ID	ID
	80th	1475	83	159	16	132	17	703	49	2140	71	367.0	12	1.35	0	6005	945	8.2	576.5	ID	0.60	ID	ID	ID	ID	21.53	ID	ID
19. Upper Warrego	20th	51	53	16	11	7	12	85	21	45	28	19.9	6	0.00	0	0	74	7.1	103.0	32.0	0.20	0.000	0.000	ID	ID	2.23	0.000	ID
	50th	151	70	26	14	17	15	151	45	195	45	47.3	11	1.85	0	1000	137	7.7	136.0	61.0	0.30	0.000	0.010	ID	ID	5.90	0.413	ID
	80th	362	76	57	27	37	21	226	66	357	70	82.6	13	3.85	1	2100	299	8.2	209.1	65.0	0.43	0.040	0.048	ID	ID	9.79	0.935	ID
19. Upper Warrego near stream	20th	54	55	17	11	7	12	74	21	42	27	19.4	5	0.00	0	31	75	7.1	105.0	42.5	0.20	0.000	0.000	ID	ID	2.55	0.000	ID
	50th	151	70	26	13	17	15	146	43	195	46	47.3	11	1.80	0	1000	137	7.7	138.0	61.0	0.30	0.000	0.010	ID	ID	5.90	0.413	ID
	80th	354	76	56	26	36	20	221	67	357	70	80.5	13	4.10	1	2085	290	8.1	206.5	65.0	0.42	0.033	0.080	ID	ID	8.50	1.022	ID
20. Lower Warrego	20th	68	65	5	5	3	5	6	1	34	25	10.0	3	0.00	0	118	21	6.7	80.5	20.5	0.24	0.027	0.003	ID	ID	3.35	0.000	ID

Draft Water Quality Objectives for Queensland Murray-Darling Basin – Alluvial Aquifer Zones

Zone	Percentile	Notes: 1. The ANZECC Guidelines (ANZECC/ARMCANZ, 2000) recommend that the highest level of protection should be provided to underground aquatic ecosystems, given their high conservation value. The management intent is to maintain the existing water quality distribution (20th, 50th and 80th percentiles). 2. ID: Insufficient data. 3. 'Near stream' refers to a 1.5km buffered area around the stream.																											
		Na		Ca		Mg		HCO ₃		Cl		SO ₄		NO ₃		Electrical Conductivity (µS/cm)	Hardness (mg/L)	pH	Alkalinity (mg/L)	SiO ₂ (mg/L)	F (mg/L)	Fe (mg/L)	Mn (mg/L)	Zn (mg/L)	Cu (mg/L)	SAR (meq/L)	Total Nitrogen mg/L	Total Phosphorous mg/L	
		mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%	mg/L	%														
s1. Alluvial																													
	50th	225	72	25	12	13	15	165	43	112	48	37.5	8	0.00	0	611	112	7.5	140.0	29.5	0.40	0.170	0.01	ID	ID	13.60	0.054	ID	
	80th	5293	90	535	20	539	17	250	65	8622	85	2081.0	18	1.17	0	18550	3453	7.7	227.5	50.5	0.71	0.315	0.094	ID	ID	34.40	0.254	ID	
20. Lower Warrego near stream	20th	45	62	3	4	2	2	0	2	34	25	9.4	3	0.00	0	0	14	6.6	98.0	14.4	0.29	0.024	0.003	ID	ID	2.86	0.000	ID	
	50th	1745	72	150	13	157	15	171	51	2483	71	717.0	10	1.15	0	2536	1022	7.6	140.0	27.0	0.40	0.250	0.015	ID	ID	22.68	0.250	ID	
	80th	2154	96	297	20	248	17	204	67	3941	82	993.0	23	1.15	0	10986	1761	7.7	167.9	44.5	0.60	0.250	0.098	ID	ID	23.71	0.250	ID	
21. Paroo	Insufficient data																												
22. Bulloo	Insufficient data																												

References:

McNeil, V.H., Raymond, M.A.A., Bennett, L. & McGregor, G.B. (2018), *Regional groundwater chemistry zones: Queensland Murray-Darling Basin*, Department of Environment and Science, Queensland Government.