



Table 2: Walgett Shire Council Waste Depot Groundwater Monitoring Points 1-5

Sample ID	Pt 1		Pt 2						Pt 3						Pt 4	Pt 5	Guidelines Aquatic Ecosystems	Guidelines Irrigation	Guidelines Drinking			
	WL1		WL 2						WL 3						WL 4	WL 5						
	No Sample	Units	150417-3	150641-3	150864-3	160172-3	160612-3	160860-3	162095-3	150135-2	150417-2	150641-2	150864-2	160172-2	160612-2	160860-2				No Sample	No Sample	
Alkalinity (as CaCO <sub>3</sub> )	NS	mg/L	440	440	440	460	450	440	480	290	300	310	310	330	320	320	360	NS	NS	Na	Na	<200
Aluminium	NS	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.02	0.03	0.05	0.08	<0.01	0.01	NS	NS	Na	Na	<0.1
Ammonia as N	NS	mg/L	0.046	0.063	0.046	0.077	0.040	0.068	0.099	0.97	0.45	0.49	0.46	0.40	0.25	0.38	0.31	NS	NS	<0.9-2.3	Na	<0.5
Arsenic	NS	mg/L	0.005	0.004	0.006	0.007	0.005	0.006	0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NS	NS	<0.24-0.36	<0.1-2.0	<0.007
BOD	NS	mg/L	<5	<5	<5	9	<5	14	<5	<5	<5	<5	<5	<5	<5	20	<5	NS	NS	Na	Na	Na
Barium	NS	mg/L	0.032	0.030	0.100	0.079	0.079	0.032	0.090	0.100	0.110	0.200	0.150	0.150	0.150	0.092	0.130	NS	NS	Na	Na	<0.7
Benzene	NS	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	NS	NS	<0.95-2.0	Na	<0.001
Cadmium	NS	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	NS	NS	<0.0002	<0.01-0.05	<0.002
Calcium	NS	mg/L	210	220	220	240	210	220	230	67	72	62	59	66	57	56	53	NS	NS	Na	Na	Na
Chloride	NS	mg/L	4600	4400	4400	4000	4000	3400	4200	830	810	880	870	910	850	800	860	NS	NS	Na	Na	<250
Chromium (hexavalent)	NS	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NS	NS	<0.001-0.04	Na	<0.05
Chromium	NS	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	NS	NS	Na	Na	Na
Conductivity	NS	µS/cm	15000	14000	13000	15000	14000	14000	14000	3500	3900	3500	3700	3900	3900	3900	3800	NS	NS	200-300	1300-2900	<800
Copper	NS	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	NS	NS	<0.001-0.003	<0.2-5.0	<1.0



Sample ID	Pt 1		Pt 2										Pt 3					Pt 4		Pt 5		Guidelines Aquatic Ecosystems	Guidelines Irrigation	Guidelines Drinking
	WL1		WL 2										WL 3					WL 4	WL 5					
	No Sample	Units	150135-27/01/2015	150417-28/04/2015	150641-30/07/2015	150864-22/10/2015	160172-21/01/2016	160612-14/04/2016	160860-28/07/2016	162095-25/11/2016	150135-27/01/2015	150417-28/04/2015	150641-30/07/2015	150864-22/10/2015	160172-21/01/2016	160612-14/04/2016	160860-28/07/2016	162095-25/11/2016	No Sample	No Sample				
Ethyl Benzene	mg/L	NS	<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	NS	NS	Na	Na	<0.003		
Fluoride	mg/L	NS	0.13	0.14	0.10	0.10	<0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	NS	NS	Na	Na	<1.5		
Iron	mg/L	NS	0.17	0.17	0.20	0.32	0.61	0.39	0.35	0.43	0.43	0.23	0.07	0.61	0.34	0.37	0.37	NS	NS	Na	Na	<0.3		
Lead	mg/L	NS	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	NS	NS	<0.003-0.009	<0.001	<0.01		
Magnesium	mg/L	NS	210	250	210	210	210	210	220	40	40	41	45	40	39	38	38	NS	NS	Na	Na	Na		
Manganese	mg/L	NS	0.33	0.33	0.36	0.36	0.30	0.30	0.39	0.49	0.35	0.33	0.37	0.30	0.30	0.22	0.22	NS	NS	<1.9-3.6	<0.2-10.0	<0.1		
Mercury	mg/L	NS	<0.00005	<0.00005	0.00007	0.00015	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	NS	NS	<0.0006-0.005	<0.002	<0.001		
Nitrate as N	mg/L	NS	0.040	0.030	0.010	0.010	0.050	0.03	0.03	0.11	0.030	0.058	0.040	0.11	0.02	0.02	0.02	NS	NS	0.7-17	<5-125	<11-45		
Organo-chlorines	mg/L	NS	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NS	NS	<0.0001	<0.001	<0.001		
Phenols Total	mg/L	NS	<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	<0.05	NS	NS	<0.16	<0.32 NEPM 2010	<0.001		
Phosphorus Total	mg/L	NS	0.07	0.08	0.1	0.1	0.1	0.1	0.1	0.6	0.4	0.4	0.3	0.4	0.3	0.3	0.3	NS	NS	<0.01	0.8-12.0	Na		
Polychlorinated Biphenyls	mg/L	NS	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	NS	NS	<0.0001	<2.0	<0.0006 NEPM		
Poly Aromatic Hydrocarbons	mg/L	NS	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	NS	NS	<0.016	Na	<0.00001		
Potassium	mg/L	NS	7.6	6.3	5.8	7.4	8.2	6.5	7.3	12	9.9	10	12	11	10	9.0	9.0	NS	NS	Na	Na	Na		
Sodium	mg/L	NS	3500	3800	3700	4200	3700	3800	4000	800	830	890	950	920	950	920	920	NS	NS	Na	Na	<180		



Sample ID	Pt 1		Pt 2						Pt 3						Pt 4		Pt 5		Guidelines Aquatic Ecosystems	Guidelines Irrigation	Guidelines Drinking			
	WL1		WL 2						WL 3						WL 4		WL 5							
	No Sample	Units	150135-3 27/01 2015	150417-3 28/04 2015	150641-3 30/07 2015	150864-3 22/10 2015	160172-3 21/01 2016	160612-3 14/04 2016	160860-3 28/07 2016	162095-3 25/11 2016	150135-2 27/01 2015	150417-2 28/04 2015	150641-2 30/07 2015	150864-2 22/10 2015	160172-2 21/01 2016	160612-2 14/04 2016	160860-2 28/07 2016	162095-2 25/11 2016				No Sample	No Sample	
Standing Water Level	m	NS	13.1	13.6	13.2	13.0	13.8	13.1	13.1	13.1	13.1	13.0	12.2	12.3	12.0	12.2	12.3	12.3	12.2	NS	NS	Na	Na	Na
Sulfate as S	mg/L	NS	1000	1100	1200	1300	1100	1200	1100	1200	1100	1200	1200	1200	1200	1200	1200	1200	340	NS	NS	Na	Na	<250
Toluene	mg/L	NS	<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	NS	NS	Na	Na	<0.025
Total Dissolved Solids	mg/L	NS	9100	11000	9300	10000	10000	11000	9600	13000	2100	2300	2200	2300	2800	2200	2500	2500	2500	NS	NS	<125-188	<800-1800	<500
Total Organic Carbon	mg/L	NS	2	1	1	2	3	2	3	1	4	3	4	5	6	4	3	3	3	NS	NS	Na	Na	Na
Total Petroleum Hydrocarbons C6-C10	mg/L	NS	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	NS	NS	C6-C10 <1.0		
Total Petroleum Hydrocarbons C10-C40	mg/L	NS	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.34	<0.1	<0.1	<0.1	<0.1	<0.1	NS	NS	Groundwater HSLs for vapour intrusion (mg/L) NEPM 2013 <1.0		
Xylene	mg/L	NS	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	NS	NS	<0.2-0.34	Na	<0.02	
Zinc	mg/L	NS	0.034	0.007	0.010	0.12	0.047	0.061	0.009	0.044	0.004	0.002	0.007	0.038	0.056	0.007	0.047	0.047	0.047	NS	NS	<0.008-0.03	<2.0-5.0	<3.0
pH Value	pH Units	NS	7.2	7.5	7.5	7.4	7.5	7.2	7.2	7.4	7.2	7.2	7.4	7.5	7.2	7.5	7.6	7.6	7.6	NS	NS	6.0-8.0	6.0-8.5	6.5-8.5

**Guidelines:** Depending on the beneficial reuse of the groundwater supplies whether it is irrigation, drinking, stock or environmental flows for aquatic ecosystems. For this particular site the irrigation guidelines will be referred to as the most likely reuse option. The highlighted figures are the most recent set of results.

1. ANZECC (2000) Australian & New Zealand Guidelines for Fresh & Marine Waters for Aquatic Ecosystems (95% - 80% protection) for Up-land and Low-land Rivers.
2. ANZECC (2000) Australian & New Zealand Guidelines for Fresh & Marine Waters for Primary Industries. DECCW (2004) Environmental Guidelines: Use of Effluent by Irrigation.
3. ANZECC (2007) Australian & New Zealand Guidelines for Drinking Water.
4. NEPM (2013) Schedule B1 Guideline on Investigation Levels for Soil & Groundwater.

**6** ~ Sample could not be collected  
**NT** ~ Testing not required  
**Na** ~ Not applicable