

Metropolitan Coal Water Sites Register

Site	Started	RL (mAHD)	Comments	Location
Pluviometers				
PV1	16/5/2006	-	Waratah Rivulet	Refer Figure 1
PV2	27/3/2007	-	Woronora River	
PV5	26/6/2010	-	Honeysuckle Creek	
PV6	26/6/2010	-	Waratah Rivulet	
PV7	26/6/2010	-	Eastern Tributary	
Evaporimeter				
PV1	28/8/2010	-	Waratah Rivulet	Refer Figure 1
Swamp Groundwater (including Swamp Substrate and Shallow Groundwater Level Piezometers)				
SWAMP1	7/2/2007	295.608 (ref. RL)	Surface RL 295.048, Piezo depth 3.12 m, Piezo RL 291.928	Refer Figure 2
SWAMP2	4/4/2007	245.336 (ref. RL)	Surface RL 244.796, Piezo depth 1.46 m, Piezo RL 243.333	
SWAMP3	7/2/2007	294.719 (ref. RL)	Surface RL 294.709, Piezo depth 4.33 m, Piezo RL 289.779	
SWAMP4	12/3/2009	344.093 (ref. RL)	Surface RL 343.793, Piezo depth 1.02 m, Piezo RL 342.773	
SWGW1	12/3/2009	343.739 (ref. RL)	Piezo depth ~20 m	
S25	31/8/2010	273.148 (ref. RL)	Piezo depth ~0.9 m	
S25	31/8/2010	272.912 (ref. RL)	Piezo depth ~10 m	
S101 (control)	31/8/2010	293.44 (ref. RL)	Piezo depth ~0.9 m	
S101 (control)	31/8/2010	293.38 (ref. RL)	Piezo depth ~10 m	
S16 ¹	30/8/2010	251.2	Piezo depth ~10 m	
S17	1/9/2010	240.6	Piezo depth ~10 m	
S20	1/9/2010	219.280 (ref. RL)	Piezo depth ~0.9 m	
S20	1/9/2010	219.142 (ref. RL)	Piezo depth ~4 m	
S20	1/9/2010	219.135 (ref. RL)	Piezo depth ~10 m	
WRSWAMP1 (control)	2/9/2010	321.14 (ref. RL)	Piezo depth ~0.9 m	
WRSWAMP1 (control)	2/9/2010	321.14 (ref. RL)	Piezo depth ~4 m	
WRSWAMP1 (control)	2/9/2010	321.04 (ref. RL)	Piezo depth ~10 m	
S28	8/3/2013	247.94 (ref. RL)	Piezo depth ~1 m	
S28	8/3/2013	247.79 (ref. RL)	Piezo depth ~10 m	
S30	8/3/2013	236.23 (ref. RL)	Piezo depth ~1 m	
S30	8/3/2013	235.96 (ref. RL)	Piezo depth ~10 m	
S33	8/3/2013	241.25 (ref. RL)	Piezo depth ~1 m	
S33	8/3/2013	241.18 (ref. RL)	Piezo depth ~10 m	

Metropolitan Coal Water Sites Register (Continued)

Site	Started	RL (mAHD)	Comments	Location
Swamp Groundwater (including Swamp Substrate and Shallow Groundwater Level Piezometers) (Continued)				
S35	8/3/2013	256.03 (ref. RL)	Piezo depth ~1 m	Refer Figure 2
S35	8/3/2013	256.10 (ref. RL)	Piezo depth ~10 m	
S137a (Control)	8/3/2013	271.25 (ref. RL)	Piezo depth ~1 m	
S137a (Control)	8/3/2013	271.09 (ref. RL)	Piezo depth ~10 m	
S137b (Control)	8/3/2013	276.63 (ref. RL)	Piezo depth ~1 m	
S137b (Control)	8/3/2013	276.68 (ref. RL)	Piezo depth ~10 m	
Bee Creek Swamp (Control)	8/3/2013	241.09 (ref. RL)	Piezo depth ~1 m	
Bee Creek Swamp (Control)	8/3/2013	241.25 (ref. RL)	Piezo depth ~10 m	
S40	28/6/2016	231.2	Piezo depth 1 m	
S40	28/6/2016	231.2	Piezo depth 9.9 m	
S41	28/6/2016	278.6	Piezo depth 0.8 m	
S41	28/6/2016	278.6	Piezo depth 9.9 m	
S46	28/6/2016	282.0	Piezo depth 0.7 m	
S46	28/6/2016	282.0	Piezo depth 10.1 m	
S50	27/6/2016	266.0	Piezo depth 0.4 m	
S50	27/6/2016	266.0	Piezo depth 9.9 m	
S51	28/6/2016	274.1	Piezo depth 0.6 m	
S51	28/6/2016	274.1	Piezo depth 9.9 m	
S52	30/6/2016	283.0	Piezo depth 1.1 m	
S52	30/6/2016	283.0	Piezo depth 9.8 m	
S53	28/6/2016	294.5	Piezo depth 1.7 m	
S53	28/6/2016	294.5	Piezo depth 9.9 m	
S71a	27/6/2016	275.7	Piezo depth 0.3 m	
S71a	27/6/2016	275.7	Piezo depth 9.9 m	
Shallow Groundwater Level Bores Near Streams				
WRGW1	16/2/2007	207.828	~ 20 m	Refer Figure 3
WRGW2	16/2/2007	207.916	~ 20 m	
WRGW3	16/2/2007	214.999	~ 20 m	
WRGW4	16/2/2007	217.824	~ 20 m	
WRGW5	4/4/2007	225.442	~ 20 m	
WRGW6	4/4/2007	226.110	~ 20 m	
WRGW7	1/9/2010	184.220	~ 20 m	
WRGW8 ²	1/9/2010	184.263	~ 20 m	
FGGW1	8/3/2007	232.403	~ 20 m	
FGGW2	4/4/2007	240.510	~ 20 m	
FGGW3	4/4/2007	250.380	~ 20 m	
UTGW1	16/2/2007	218.196	~ 20 m	
UTGW2	7/3/2007	237.637	~ 20 m	
UTGW3	7/3/2007	247.197	~ 20 m	
RTGW1A ³	23/8/2007	221.979	~ 19.5 m	
ETGW1	1/9/2010	172.627	~ 20 m	
ETGW2	1/9/2010	172.05	~ 20 m	

Metropolitan Coal Water Sites Register (Continued)

Site	Started	RL (mAHD)	Comments	Location
Shallow Groundwater Level Bores Transect				
T1	7/9/2016	174.106 (Top of collar - mAHD)	21 m	Refer Figure 3
T2	7/9/2016	195.118 (Top of collar - mAHD)	35 m	
T3	7/9/2016	225.450 (Top of collar - mAHD)	61 m	
T4	7/9/2016	236.306 (Top of collar - mAHD)	67 m	
T5	7/9/2016	258.041 (Top of collar - mAHD)	89 m	
Deep Groundwater Level/Pressure Bores				
9EGW1B	1/11/2009	309.050	Piezo RL's 257.0, 218.0, 139.0, 96.0, 76.0, -94.0, -115.0, -141.0, -179.0, -232.5	Refer Figure 3
9GGW1B ⁴	14/3/2009	287.9	Piezo RL's 242.9, 228.4, 163.9, 128.9, 108.9, -57.2, -97.2, -116.2, -128.2, -188.8	
9GGW1-80 ⁴	21/11/2013	286.996	Piezo depth ~ 80 m	
9HGW1B	12/11/2008	351.230	Piezo RL's 299.2, 269.7, 193.2, 176.6, 145.8, 125.8, 48.2, -34.4	
PM01 (9DGW1B)	5/2/2010	283.61	Piezo RL's 231.75, 193.75, 113.75, 65.75, 45.75, -156.31, -131.31, -198.31, -210.31, -263.81	
PM02	23/12/2007	267.4	Piezo RL's 232.35, 167.35, 47.35, 17.35, -132.65, -167.65, -207.65, -227.65	
PM03	14/2/2011	264.998	Piezo RL's 201.0, 158.5, 116.0, 75.7, 51.0, -120.0, -143.0, -165.2, -197.0, -227.0, -261.0	
9HGW0 (LW10 Goaf Hole)	12/4/2007	274.5	Piezo RL's 239.5, 204.5, 164.5, 139.5, 109.5, 69.5, 24.5, -25.5	
9GGW2B	20/4/2010	240.781	Piezo RL's 185.8, 160.5, 135.28, 102.98, 78.28, -63.22, -98.72, -152.22, -196.22, -233.32	
9FGW1A	19/02/2010	310.158	Piezo RL's 255.2, 236.7, 173.2, 125.7, 100.7, -58.8, -94.3, -144.8, -180.3, -203.1	

Metropolitan Coal Water Sites Register (Continued)

Site	Started	RL (mAHD)	Comments	Location
Groundwater Level/Pressure Bores (Continued)				
9EGW2A	28/5/2011	276.936	Piezo RL's 216.9, 169.4, 121.9, 65.1, 42.4, -129.6, -155.6, -177.1, -206.6, -240.1, -279.6	Refer Figure 3
PHGW1B	28/6/2010	289.750	Piezo RL's 224.8, 174.3, 123.8, 74.3, 51.8, -106.3, -142.3, -192.6, -228.6, -264.4	
PHGW2A	16/3/2011	263.0	Piezo RL's 203.0, 165.5, 128.0, 81.5, 62.0, -102.0, -126.0, -148.0, -174.0, -207.0, -245.0	
S1997 ⁵	10/6/2009	370.2	Piezo RL's 346.2, 301.7, 238.2, 152.2, 77.7, -1.8, -58.8, -71.3, -83.3, -134.3, -141.4	
F6GW3A	17/6/2013	242.608	Piezo RL's 192.61, 172.61, 142.61, 107.61, 22.61, -65.39, -137.39, -207.39	
F6GW4A	17/6/2013	265.013	Piezo RL's 215.01, 175.01, 126.01, 64.01, -12.99, -96.99, -174.99, -246.99	
Shallow Groundwater Quality Sites				
SWGW1	12/3/2009	343.7	~ 20 m	Refer Figure 4
WRGW1	16/2/2007	207.828	~ 20 m	
WRGW2	16/2/2007	207.916	~ 20 m	
WRGW3	16/2/2007	214.999	~ 20 m	
WRGW4	16/2/2007	217.824	~ 20 m	
WRGW5	4/4/2007	225.442	~ 20 m	
WRGW6	4/4/2007	226.110	~ 20 m	
WRGW7	1/9/2010	184.22	~ 20 m	
FGGW1	8/3/2007	232.403	~ 20 m	
FGGW2	4/4/2007	240.510	~ 20 m	
FGGW3	4/4/2007	250.380	~ 20 m	
UTGW1	16/2/2007	218.196	~ 20 m	
UTGW2	7/3/2007	237.637	~ 20 m	
UTGW3	7/3/2007	247.197	~ 20 m	
RTGW1A ³	23/8/2007	221.979	~ 19.5 m	
ETGW1	1/9/2010	172.627	~ 20 m	
Deep Groundwater Chemistry Sites⁶				
9F2-50C	-	239.8	50 m	Refer Figure 4
9F2-150C	-	139.8	150 m	
9F2-250D	-	39.8	250 m	
PH2-25E	-	238	25 m	
PH2-110C	-	153	110 m	
PH2-230D	-	33	230 m	
PM03-25E	-	242.7	25 m	
PM03-105C	-	160.7	105 m	

Metropolitan Coal Water Sites Register (Continued)

Site	Started	RL (mAHD)	Comments	Location
Deep Groundwater Chemistry Sites⁶ (Continued)				
PM03-230D	-	35.7	230 m	Refer Figure 4
9E1-36E	-	273.2	36 m	
9E1-80E	-	229.2	80 m	
9E1-108C	-	201.2	108 m	
9E1-250D	-	59.2	250 m	
9H1-35E	-	315.3	35 m	
9H1-82E	-	268.3	82 m	
9H1-150C	-	200.3	150 m	
9H1-233D	-	117.3	233 m	
9G1-70C	-	216.0	70 m	
9G1-45E	-	242.0	45 m	
9G1-140C	-	147.0	140 m	
9G1-190D	-	97.0	190 m	
9G3-32E	-	228.0	32 m	
9G3-117C	-	143.0	117 m	
9G3-216D	-	44.0	216 m	
F6GW3-85C	-	158.5	85 m	
F6GW4-36E	-	229.0	36 m	
F6GW4-104C	-	161.0	104 m	
F6GW4-208D	-	57.0	208 m	
Pool Water Level Sites				
A	29/9/2005	-	Automated	Refer Figure 5
B	29/9/2005	-	Manual	
C	29/9/2005	-	Manual	
E	29/9/2005	-	Manual	
F	29/9/2005	-	Automated	
G	29/9/2005	-	Manual	
G1	13/10/2005	-	Manual	
H	12/10/2005	-	Manual	
I	12/10/2005	-	Manual	
J	1/7/2010	-	Automated	
K	1/7/2010	-	Automated	
L	11/12/2008	-	Automated	
M	11/12/2008	-	Automated	
N	11/12/2008	-	Automated	
O	11/12/2008	-	Automated	
P	11/12/2008	-	Automated	
Q	20/1/2010	-	Automated	
R	11/12/2008	-	Automated	
S	11/12/2008	-	Automated	
T	20/1/2010	-	Automated	
U	20/1/2010	-	Automated	
V	20/1/2010	-	Automated	
W	20/1/2010	-	Automated	
ETG	16/2/2011	-	Automated	
ETJ	29/03/2011	-	Automated	

Metropolitan Coal Water Sites Register (Continued)

Site	Started	RL (mAHD)	Comments	Location
Pool Water Level Sites (Continued)				
ETM (previously ETP1)	11/12/2008	-	Automated	Refer Figure 5
ETU (previously ETP2)	18/05/2010	-	Automated	
ETW (previously ETP3)	18/05/2010	-	Automated	
ETAF	12/11/2010	-	Automated	
ETAG	12/11/2010	-	Automated	
ETAH	19/1/2011	-	Automated	
ETAI	19/1/2011	-	Automated	
ETAQ	17/1/2011	-	Automated	
ETAU	18/05/2010	-	Automated	
RTP1	7/3/2007	-	Pool TB-T, Automated	
RTP2	7/3/2007	-	Pool TB-AF, Automated	
UTP1	7/3/2007	-	Automated	
UTP2	7/3/2007	-	Automated	
UTP3	7/3/2007	-	Automated	
WRP1	11/12/2008	-	Automated	
WRP2	1/7/2010	-	Automated	
WRP3	1/7/2010	-	Automated	
WRP4	1/7/2010	-	Automated	
Surface Water Flow Sites				
Eastern Tributary (GS 300078)	January 2013	-	-	Refer Figure 5
Honeysuckle Creek (GS 300077)	January 2013	-	Control Site	
Surface Water Quality Sites				
WRWQ 1	27/9/2006	-		Refer Figure 6
WRWQ 2	27/9/2006	-		
WRWQ 3	27/9/2006	-		
WRWQ 4	27/9/2006	-	Pool B	
WRWQ 5	27/9/2006	-		
WRWQ 6	27/9/2006	-	Pool F	
WRWQ 7	27/9/2006	-	Pool H	
WRWQ 8	27/9/2006	-		
WRWQ 9	27/9/2006	-	Pool Q	
WRWQ J	27/1/2010	-	Pool J	
WRWQ K	27/1/2010	-	Pool K	
WRWQ L	11/12/2008	-	Pool L	
WRWQ M	11/12/2008	-	Pool M	
WRWQ N	11/12/2008	-	Pool N	
WRWQ O	11/12/2008	-	Pool O	
WRWQ P	11/12/2008	-	Pool P	
WRWQ R	11/12/2008	-	Pool R	
WRWQ S	11/12/2008	-	Pool S	
WRWQ T	10/2/2010	-	Pool T	
WRWQ U	10/2/2010	-	Pool U	
WRWQ V	10/2/2010	-	Pool V	
WRWQ W	10/2/2010	-	Pool W	
UTWQ 1	3/8/2006	-		
UTWQ 2	3/8/2006	-		

Metropolitan Coal Water Sites Register (Continued)

Site	Started	RL (mAHD)	Comments	Location
Surface Water Quality Sites (Continued)				
UTWQ 3	3/8/2006	-		Refer Figure 6
UTWQ 4	3/8/2006	-		
UTWQ 5	3/8/2006	-		
FGWQ 1	1/8/2006	-		
FGWQ 2	1/8/2006	-		
FGWQ 3	1/8/2006	-		
FGWQ 4	1/8/2006	-		
FGWQ 5	1/8/2006	-		
RTWQ 1	3/8/2006	-	Pool TB-AM	
RTWQ 2	3/8/2006	-	Pool TB-AF	
RTWQ 3	3/8/2006	-		
ETWQ F	17/2/2010	-	Pool ET F	
ETWQ J	17/2/2010	-	Pool ET J	
ETWQ N	7/9/2007	-	Pool ET N	
ETWQ U	28/1/2010	-	Pool ET U	
ETWQ W	28/1/2010	-	Pool ET W	
ETWQ AF	28/1/2010	-	Pool AF	
ETWQ AG	28/1/2010	-	Pool AG	
ETWQ AH	28/1/2010	-	Pool AH	
ETWQ AI	28/1/2010	-	Pool AI	
ETWQ AK	28/1/2010	-	Pool AK	
ETWQ AQ	28/1/2010	-	Pool AQ	
ETWQ AU	28/1/2010	-	Pool AU	
FEWQ 1	7/9/2007	-		
BCWQ 1	7/9/2007	-		
HCWQ 1	7/9/2007	-		
WOWQ 1	7/9/2007	-	Control Site	
WOWQ 2	17/01/2008	-	Control Site	
WOWQ 3	11/12/2008	-	Pool WR1, Control Site	
WOWQ 4	28/1/2010	-	Pool WR2, Control Site	
WOWQ 5	28/1/2010	-	Pool WR3, Control Site	
WOWQ 6	28/1/2010	-	Pool WR4, Control Site	

- ¹ As discussed in the *Metropolitan Coal 2013 Annual Review and Annual Environmental Management Report* (Metropolitan Coal, 2014), the sensor in the Swamp 16 piezometer became unreliable.
- ² As reported in the *Metropolitan Coal 2014 Annual Review and Annual Environmental Management Report/Rehabilitation Report* (Metropolitan Coal, 2015), site WRGW8 is faulty and is no longer recording reliable data.
- ³ Due to bore failure as a result of subsidence, bore RTGW1A on Tributary B has not been able to be dipped since December 2013. The diver was able to be downloaded up until May 2014.
- ⁴ Multi-level piezometer site 9GGW1B was installed above Longwall 22 to monitor deep groundwater levels/pressure as part of the Longwalls 20-22 monitoring program, however this site was decommissioned due to safety risks in late 2013 prior to Longwall 22 passing the site. Metropolitan Coal replaced this site with a new bore (9GGW1-80) which monitors the groundwater level with a single piezometer at 80 m depth.
- ⁵ Data courtesy of BHP Billiton Illawarra Coal.
- ⁶ The deep groundwater chemistry sites are sampled by Metropolitan Coal to meet its Dams Safety Committee Approval requirements.