Englishman River Well PW2 Water Analysis
2231 Rascal Lane

CDWG=Canadian Drinking Water Guidelines
OG= Operational Guidance Value

MAC=Maximum Acceptable Concentration
AO= Asthetic Objective.

Red font indicates non-compliance with Canadian Drinking Water Guidelines

	Units	CDWG		October 26 2004	October 19 2005	October 24 2006	October 23 2007	October 8 2008	October 14 2009	October 19 2010	October 26 2011	October 22 2012	October 17 2013					
Miscellaneous Inorganics																		
Fluoride	mg/L	1.5	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.1	0.1	0.1					
Alkalinity (total as $CaCO_3$)	mg/L			140	140	120	120	130	130	130	130	150	130					
Anions																		
Dissolved Sulphate	mg/L	500	AO	7.5	9.2	7.4	7.2	7.6	7.4	7.8	7.9	8.6	8.1					
Dissolved Chloride	mg/L	250	AO	3	4.2	5.3	7.4	8.8	10.8	15.8	20.6	25.5	29.3					
Nitrite	mg/L	1	MAC	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.05	<0.05					
Miscellaneous																		
Apparent Colour	Colour Unit			<5	<5	<5	<5	<5	<5	<5	<5	<1	<5					
Nutrients																		
Total Ammonia	mg/L											0.13	0.04					
Physical Properties																		
Conductivity	µS/cm			257	276	272	281	283	294	314	323	331	340					
pH	pH	7.0:10.5	OG	8.1	8.2	8.3	8.16	7.9	8.3	8.2	8.2	8.2	8.2					
TDS	mg/L	500	AO	160	252	160	160	156	176	174	194	138	154					
Turbidity	NTU			0.17	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5	<0.5					
Microbiological Parameters																		
E.coli	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0					
Total Coliforms	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0					
Calculated Parameters																		
Total Hardness ($CaCO_3$)	mg/L			130	120	110	120	120	130	140	140	140	140					
Nitrate	mg/L	10	MAC	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.05	<0.05					
Elements																		
Total Mercury	mg/L	0.001	MAC	<0.0002	<0.0001	<0.0001	<0.0001	<0.01	<0.01	0.00001	<0.00001	<0.0001	<0.00001					
Total Metals																		
Total Aluminum	mg/L	0.1	OG	<0.005	<0.005	0.006	<0.005	0.02	<0.005	<0.005	<0.005	0.007	<0.005					
Total Antimony	mg/L	0.006	MAC	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0002					
Total Arsenic	mg/L	0.01	MAC	0.0023	0.0027	0.002	0.0021	0.002	0.002	0.002	0.002	0.00193	0.002					
Total Barium	mg/L	1	MAC	0.018	0.018	0.017	0.019	0.022	0.018	0.019	0.02	0.0213	0.022					
Total Beryllium	mg/L										<0.00004	<0.00005	<0.00004					
Total Bismuth	mg/L										<0.001	0.0001	<0.0010					
Total Boron	mg/L	5	MAC	0.042	0.038	0.04	0.043	0.042	0.041	0.04	0.039	0.041	0.035					
Total Cadmium	mg/L	0.005	MAC	<0.00001	<0.00001	<0.00001	0.00011	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001					
Total Chromium	mg/L	0.05	MAC	<0.0005	<0.0005	<0.0005	<0.0005	<0.0004	<0.0004	0.001	<0.0004	<0.0005	<0.0004					
Total Cobalt	mg/L										0.00002	<0.0001	0.00002					
Total Copper	mg/L	1	AO	0.002	0.002	0.001	0.001	0.005	0.002	0.002	<0.01	0.0008	<0.001					
Total Iron	mg/L	0.3	AO	<0.1	<0.1	<0.1	<0.1	0.04	0.011	<0.01	0.015	0.007	<0.010					
Total Lead	mg/L	0.01	MAC	0.0008	0.004	0.0003	0.0001	0.0387	0.0036	0.0003	0.0005	0.0005	0.0002					
Total Manganese	mg/L	0.05	AO	0.022	0.023	0.018	0.02	0.0233	0.0223	0.022	0.022	0.0325	0.0265					
Total Molybdenum	mg/L										0.0011	0.00133	0.0012					
Total Nickel	mg/L								<0.001	<0.001	<0.001	<0.0002	<0.001					
Total Selenium	mg/L	0.05	MAC	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	<0.0006	<0.0006	<0.0006	<0.0001	<0.0006					
Total Silicon	mg/L										6.04	6.76	6.2					
Total Silver	mg/L								<0.00001	<0.00001	<0.00001	<0.00001	<0.00001					
Total Strontium	mg/L										0.25	0.261	0.272					
Total Thallium	mg/L										<0.00001	<0.00001	<0.00001					
Total Tin	mg/L										<0.0001	0.0002	<0.0001					
Total Titanium	mg/L										0.002	<0.0005	<0.0010					
Total Uranium	mg/L	0.02	MAC	<0.0005	<0.0005	<0.0005	<0.0005	<0.0004	<0.0004	<0.0004	<0.0004	0.00032	<0.0004					
Total Vanadium	mg/L										0.0002	0.0003	0.0003					
Total Zinc	mg/L	5	AO	0.022	0.009	0.018	0.008	0.026	0.017	0.007	0.007	0.0053	0.006					
Total Zirconium	mg/L																	
Total Calcium	mg/L			30.9	30.6	28.7	30.2	30.7	33	34.7	35.4	35.9	35.5					
Total Magnesium	mg/L			11.6	10.7	10.4	10.8	11.4	12.2	12.3	12.8	12.8	13.6					
Total Potassium	mg/L			1.1	1	1.1	1.1	1	1.1	0.9	1.2	1.2	1.32					
Total Sodium	mg/L	200	AO	11.2	11	10.7	11.6	11.4	12.7	12.5	13.3	14.6	15.6					
Total Sulphur	mg/L																	

Englishman River Well PW3 Water Analysis
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	Units	CDWG		October 26 2004	October 19 2005	October 24 2006	October 23 2007	October 8 2008	October 14 2009	October 19 2010	October 26 2011	October 22 2012	October 17 2013					
Miscellaneous Inorganics																		
Fluoride	mg/L	1.5	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.1	0.09	0.11					
Alkalinity (total as $CaCO_3$)	mg/L			140	140	130	130	130	130	130	130	130	130					
Anions																		
Dissolved Sulphate	mg/L	500	AO	8.8	9.5	9	8.3	8.4	8.2	9.2	8.6	9	9					
Dissolved Chloride	mg/L	250	AO	3.5	6.4	10.4	14.6	25.9	37.7	51.6	56.2	57	63					
Nitrite	mg/L	1	MAC	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.05	<0.05					
Miscellaneous																		
Apparent Colour	Colour Unit			<5	<5	<5	<5	<5	<5	<5	<5	<1	<5					
Nutrients																		
Total Ammonia	mg/L											0.08	0.04					
Physical Properties																		
Conductivity	µS/cm			282	298	303	327	354	395	442	449	467	471					
pH	pH	7.0:10.5	OG	8.1	8.2	8.3	8.19	7.9	8.3	8.1	8.1	8.1	8.1					
TDS	mg/L	500	AO	150	338	190	187	190	226	244	262	208	244					
Turbidity	NTU			0.18	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5					
Microbiological Parameters																		
E.coli	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0					
Total Coliforms	MPN/100mL	<1	MAC	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0					
Calculated Parameters																		
Total Hardness ($CaCO_3$)	mg/L			140	140	130	140	150	170	180	190	180	180					
Nitrate	mg/L	10	MAC	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.05	<0.05					
Elements																		
Total Mercury	mg/L	0.001	MAC	<0.0002	<0.0001	<0.0001	<0.0002	<0.01	<0.01	<0.00001	<0.00001	<0.0001	<0.00001					
Total Metals																		
Total Aluminum	mg/L	0.1	OG	<0.005	<0.005	<0.005	<0.02	0.01	<0.005	<0.005	<0.005	0.002	<0.005					
Total Antimony	mg/L	0.006	MAC	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0002					
Total Arsenic	mg/L	0.01	MAC	0.0017	0.0018	0.0015	0.002	0.0016	0.0015	0.0015	0.0015	0.00148	0.0016					
Total Barium	mg/L	1	MAC	0.019	0.02	0.019	0.02	0.024	0.024	0.041	0.026	0.0285	0.029					
Total Beryllium	mg/L										<0.00004	<0.00005	<0.00004					
Total Bismuth	mg/L										<0.001	<0.0001	<0.0010					
Total Boron	mg/L	5	MAC	0.038	0.074	0.04	0.04	0.042	0.041	0.044	0.04	0.047	0.041					
Total Cadmium	mg/L	0.005	MAC	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001					
Total Chromium	mg/L	0.05	MAC	<0.0005	<0.0005	<0.0005	<0.002	<0.0004	<0.0004	0.0009	<0.0004	<0.0005	<0.0004					
Total Cobalt	mg/L										0.00003	<0.0001	0.00003					
Total Copper	mg/L	1	AO	0.001	0.002	<0.001	<0.005	0.002	0.024	0.002	<0.001	0.0012	0.001					
Total Iron	mg/L	0.3	AO	<0.1	<0.1	<0.1	<0.5	<0.02	<0.01	0.02	0.029	0.027	0.03					
Total Lead	mg/L	0.01	MAC	0.0007	0.0015	0.0006	0.002	0.0006	0.0072	0.0004	0.0003	0.0002	0.0003					
Total Manganese	mg/L	0.05	AO	0.034	0.035	0.032	0.04	0.04	0.0415	0.047	0.044	0.0489	0.0511					
Total Molybdenum	mg/L										0.0008	0.00101	0.001					
Total Nickel	mg/L								<0.001	<0.001	<0.001	<0.0002	<0.001					
Total Selenium	mg/L	0.05	MAC	<0.0002	<0.0002	<0.0002	<0.001	<0.0006	<0.0006	<0.0006	<0.0006	<0.0001	<0.0006					
Total Silicon	mg/L										6.16	6.81	6.46					
Total Silver	mg/L								<0.00001	<0.00001	<0.00001	<0.00001	<0.00001					
Total Strontium	mg/L										0.308	0.326	0.353					
Total Thallium	mg/L										0.00001	<0.00001	<0.00001					
Total Tin	mg/L										<0.0001	0.0002	<0.0001					
Total Titanium	mg/L										0.002	<0.0005	<0.0010					
Total Uranium	mg/L	0.02	MAC	<0.0005	<0.0005	<0.0005	<0.002	<0.0004	<0.0004	<0.0004	<0.0004	0.00035	<0.0004					
Total Vanadium	mg/L										0.0002	0.0002	0.0003					
Total Zinc	mg/L	5	AO	0.003	0.006	0.006	0.008	0.007	0.008	0.01	0.005	0.0043	0.005					
Total Zirconium	mg/L																	
Total Calcium	mg/L			34.6	35.6	33.2	35	38	42.4	46.3	45.6	45.5	45.4					
Total Magnesium	mg/L			12.2	11.4	11.5	12	13.7	15.6	16.2	16.3	16	17.2					
Total Potassium	mg/L			1.1	1.5	1.2	<2	1	1.2	1.1	1.1	1.4	1.48					
Total Sodium	mg/L	200	AO	10.7	28.3	12	13	13.7	15	15.9	17.4	21.1	23.5					
Total Sulphur	mg/L																	