Physiological Profiling and Functional Diversity of Groundwater Microbial Communities in a Municipal Solid Waste Landfill Area

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Table S1. Values of physical and chemical parameters measured in the sampling sites in two sampling campaigns.

Sample	Year of sampling	Temp (°C)	pH	Cond (uS/cm)	DO (mg/L)	Eh (mV)	F (mg/L)	Cl (mg/L)	NO$_3$ (mg/L)	SO$_4$ (mg/L)	HCO$_3$ (mg/L)	Na (mg/L)	K (mg/L)	Mg (mg/L)	Ca (mg/L)	Si (mg/L)	DOC (mg/L)
PZ01	2016	16.2	6.49	1950	0.82	56.0	0.11	16.4	1.3	595.4	552.1	17.2	6.8	63.4	299.6	16.2	14.01
PZ06	2016	19.3	6.9	858	1.00	−178.0	0.22	6.8	2.0	13.1	530.7	12.5	11.9	29.9	113.8	10.9	2.32
PZ07	2016	20.9	6.97	795	5.10	90.0	0.05	16.6	2.5	33.5	466.7	12.6	0.9	20.9	124.4	9.9	0.63
PZ08	2016	16.4	6.99	915	2.10	73.0	0.11	25.2	63.8	46	387.4	12.1	5.1	15.2	138.8	8.7	2.06
PZ09	2016	16.1	7.08	937	7.70	101.0	0.18	20.6	32.5	81.4	451.4	10.9	5.9	32.6	135.8	10.4	0.88
PZ10	2016	16.7	6.9	1243	1.10	−67.0	0.22	15.6	1.5	224.0	567.3	12.6	12.8	45.4	203.7	22.6	1.81
PZ11	2016	16.9	6.28	1680	0.32	−37.0	0.10	11.0	0.1	234.5	960.8	17.6	5.2	62.7	281.4	29.6	2.16
PZ12	2016	17.1	7.2	763	0.83	−51.0	0.41	7.5	1.8	20.4	454.5	8.9	15.9	25.3	105.1	25.1	3.50
PZ13	2016	17.2	7.1	964	3.60	46.0	0.26	10.7	1.6	124	454.5	23.8	14.7	39.2	126.8	30.4	0.73
PZ14	2016	16.4	7.4	580	0.40	−230.0	0.66	6.1	1.3	1.8	359.9	11.3	10.2	22.4	80.6	33.5	3.81
PZ15	2016	16.9	7.1	835	0.92	−103.0	0.48	12.5	1.4	45.4	451.4	10.1	8.8	27.5	113.3	25.0	2.22
PZ06	2017	18.3	7.11	869	1.45	−98.0	0.34	6.9	1.0	5.4	512.4	14.7	12.3	29.3	110.6	8.5	4.60
PZ07	2017	21.8	7.12	840	7.59	75.6	0.22	12.9	3.2	23.2	451.4	7.3	0.5	23.8	124.7	6.9	0.50
PZ08	2017	19.1	7.07	1022	1.30	71.7	0.23	28.1	100.0	43.3	356.9	8.1	2.8	12.7	156.2	7.1	0.90
PZ09	2017	21.3	7.06	1007	1.03	57.0	0.30	17.8	21.6	74.6	445.3	9.4	6.6	35.1	127.5	8.6	0.80
PZ10	2017	17.1	6.81	1328	0.00	−44.6	0.30	14.3	0.7	211.3	521.6	9.4	10.2	41.7	191.3	15.3	1.70
PZ11	2017	19.7	6.45	1803	0.58	−65.3	0.85	4.75	1.14	192.9	896.7	8.3	2.6	50.1	296.8	25.4	2.60
PZ12	2017	21.7	7.22	838	0.42	−123.0	0.45	6.3	0.8	20.5	420.9	7.3	15.3	23.7	95.6	18.5	2.10
PZ13	2017	17.2	7.2	784	0.21	−2.2	0.34	8.3	0.9	60.9	359.9	7.6	6.1	25.7	97.4	14.4	0.30
PZ14	2017	18.7	7.51	637	0.02	−192.1	0.68	5.1	0.8	1.1	350.8	9.6	8.4	17.2	78.9	21.2	1.70
PZ15	2017	17.2	7.35	751	0.00	−115.5	0.54	7.5	0.0	18.6	381.3	9.2	8.5	21.5	88.5	20.2	1.00
PZ16	2017	16.4	7.35	807	0.06	−143.3	0.59	16.8	0.8	15.7	417.9	12.7	16.6	23.1	96.7	13.2	1.50

Table S2. Microbial parameters measured in the sampling sites in two sampling campaigns.

Sample	Year of sampling	Prokaryotic abundances (cells/mL)	Dead Cells (%)	LNA (%)	HNA (%)	Total Coliform (MPN/100 mL)	*Escherichia Coli* (MPN/100 mL)	AWCD 24h
PZ01	2016	1.69×10^7	0.48	80.55	19.45	1011.2	186	0.496
PZ06	2016	1.08×10^6	0.88	43.58	56.42	298.7	<1	0.143
PZ07	2016	1.44×10^5	2.18	44.22	55.78	13.5	<1	0.162
PZ08	2016	3.60×10^5	2.41	58.04	41.96	172.3	<1	0.137
PZ09	2016	1.78×10^5	5.49	47.58	52.42	72.7	<1	0.128
PZ10	2016	1.85×10^5	4.18	44.03	55.97	574.8	26.2	0.308
PZ11	2016	3.35×10^5	10.23	60.10	39.9	1011.2	2	0.607
PZ12	2016	2.06×10^5	3.82	24.19	75.81	104.6	<1	0.060
PZ13	2016	2.85×10^6	2.42	79.10	20.90	238.2	<1	0.097
PZ14	2016	7.93×10^4	32.55	27.23	72.77	40.4	<1	0.041
PZ15	2016	1.10×10^6	2.55	27.98	72.02	155.3	<1	0.109
PZ06	2017	5.19×10^6	5.40	37.51	62.49	1011.2	<1	0.158
PZ07	2017	3.53×10^5	4.40	39.22	60.78	285.1	<1	0.084
PZ08	2017	4.73×10^5	2.24	54.04	45.96	240	<1	0.234
PZ09	2017	5.25×10^5	4.02	38.36	61.64	104.3	<1	0.183
PZ10	2017	1.23×10^5	3.92	51.45	48.55	30.9	<1	0.355
PZ11	2017	2.31×10^5	1.50	90.97	9.03	145	<1	0.567
PZ12	2017	1.68×10^5	36.49	44.19	55.81	228.2	<1	0.069
PZ13	2017	9.26×10^5	8.66	79.73	20.27	4.1	<1	0.066
PZ14	2017	1.01×10^5	6.84	55.44	44.56	1011.2	<1	0.026
PZ15	2017	1.85×10^5	8.35	49.23	50.77	50.4	<1	0.034
PZ16	2017	9.01×10^5	9.99	53.18	46.82	1011.2	<1	0.051