

Table S4. Detected counts of sequencing reads for species of *Acinetobacter* or *Pseudomonas* species using metagenomic DNA-Seq analysis

Days (post treatment)	Original storage tank (Influent)										Wastewater treatment tank 1 (ozone)										Wastewater treatment tank 2 (UV-LED)									
	0	1	4	6	8	15	28	0	1	4	6	8	15	28	0	1	4	6	8	15	28									
Date (yyyy/mm/dd)	2022/11/04	2022/11/05	2022/11/08	2022/11/08	2022/11/08	2022/11/08	2022/11/08	2022/11/04	2022/11/05	2022/11/08	2022/11/08	2022/11/08	2022/11/08	2022/11/08	2022/11/04	2022/11/05	2022/11/08	2022/11/08	2022/11/08	2022/11/08	2022/11/08									
DNA conc. (ng/L)	0.5	1.1	0.7	1.2	0.6	0.7	0.8	1.3	0.2	0.4	0.9	0.4	0.5	0.5	1.4	0.3	0.5	0.5	0.8	0.6	0.7									
Metagenomic DNA-Seq (total reads)	11,562,484	9,522,700	10,930,972	14,612,202	8,286,906	7,894,732	9,196,754	13,422,972	4,136,692	3,915,464	6,300,318	4,652,896	3,947,254	3,882,996	16,972,696	1,278,814	3,510,890	60,740,408	9,225,536	7,333,522	4,123,884									
Bacteria species for <i>Acinetobacter</i> or <i>Pseudomonas</i>																														
<i>Acinetobacter baylii</i>	24	92	50	142	31	40	42	95	41	99	124	113	201	150	127	16	141	286	249	341	180									
<i>Acinetobacter baumannii</i> A424	9	9	3	13	1	2	3	12	2	1	1	5	1	0	1	12	1	0	1	2	1									
<i>Acinetobacter baumannii</i> ATCC 17978	1,286	3,622	1,720	5,987	955	1,303	1,152	2,812	1,116	828	2,548	1,052	1,723	1,212	4,324	454	1,032	3,239	2,864	4,793	2,070									
<i>Acinetobacter baumannii</i> BJAB0868	13	8	6	7	3	0	1	10	1	0	2	1	0	0	0	10	0	1	0	2	1									
<i>Acinetobacter baumannii</i> SDF	121	150	89	272	57	69	174	557	151	400	361	87	98	238	1,286	83	234	618	308	502	500									
<i>Acinetobacter lwoffii</i>	57	243	168	449	121	217	65	195	184	155	384	402	495	173	263	40	252	996	2,202	2,280	359									
<i>Acinetobacter nosocomialis</i> M2	5	19	17	43	8	9	6	17	10	2	15	10	25	9	31	2	7	47	32	49	12									
<i>Acinetobacter solis</i>	1,167	2,233	906	2,761	513	693	1,019	3,837	1,687	2,219	2,850	641	1,516	1,053	7,461	515	1,251	3,658	1,665	3,869	3,004									
<i>Acinetobacter chinensis</i>	1,196	3,031	1,227	4,305	550	665	880	4,291	3,472	3,356	3,787	1,007	1,342	1,371	8,033	824	1,762	4,174	2,174	4,229	3,822									
<i>Acinetobacter collinisensistens</i>	114	371	242	609	103	303	721	334	175	158	403	151	583	1,194	510	91	500	1,540	1,096	1,919	2,613									
<i>Acinetobacter cumulans</i>	34,413	6,706	5,310	7,727	2,078	4,035	3,134	22,091	39,103	9,096	172,891	3,678	4,961	4,358	52,195	4,375	13,372	29,269	9,715	28,100	9,113									
<i>Acinetobacter defluvis</i>	1,009	1,426	1,190	1,941	536	950	1,435	2,658	2,745	3,000	3,991	1,584	3,055	2,950	5,791	654	2,862	7,350	5,692	7,910	5,757									
<i>Acinetobacter dispersus</i>	115	451	321	867	145	205	232	283	267	376	900	335	690	388	516	103	960	2,539	1,282	1,249	603									
<i>Acinetobacter equi</i>	23	94	59	185	44	107	110	54	100	339	1,053	518	1,246	638	82	39	695	1,215	1,230	1,686	1,306									
<i>Acinetobacter haemolyticus</i>	8,103	27,865	11,468	58,984	7,107	9,847	14,592	30,447	10,817	10,415	28,522	5,848	11,837	10,343	50,925	6,182	20,008	63,847	58,141	60,222	74,868									
<i>Acinetobacter indus</i>	3,804	15,490	4,363	26,301	2,865	3,363	4,048	16,743	4,933	4,219	14,151	4,027	8,863	6,334	22,891	2,202	5,525	16,280	12,177	16,860	16,473									
<i>Acinetobacter johnsonii</i> XBB1	296	633	465	788	257	538	780	655	831	802	1,075	518	1,090	1,052	1,023	245	686	1,283	1,281	337	1,889									
<i>Acinetobacter junii</i>	79,306	367,339	105,985	686,030	94,281	73,300	53,194	268,358	90,976	132,692	164,239	28,022	35,072	18,680	469,549	56,639	16,682	100,924	62,157	29,767	27,043									
<i>Acinetobacter lantii</i>	123	558	316	1,040	154	182	252	351	280	754	1,967	976	1,664	1,098	625	107	1,360	2,922	2,438	2,310	2,268									
<i>Acinetobacter larvae</i>	48	147	63	178	25	103	52	128	62	36	120	69	277	90	156	10	69	187	208	417	182									
<i>Acinetobacter piscicola</i>	570	868	1,006	1,574	386	572	817	1,065	1,756	2,938	4,494	2,295	3,626	2,707	2,309	365	3,532	8,316	6,021	7,039	5,055									
<i>Acinetobacter portorii</i>	127	342	177	459	93	155	283	299	248	271	545	197	720	406	516	74	313	1,072	788	1,698	1,226									
<i>Acinetobacter proteolyticus</i>	8	2	3	4	1	5	1	13	20	15	9	2	0	0	30	4	5	4	6	2	2									
<i>Acinetobacter pseudoflavus</i>	328	567	331	779	149	194	320	1,105	463	852	1,745	490	654	656	2,262	173	763	1,887	1,281	1,486	1,635									
<i>Acinetobacter radiotolerans</i> DSM 6976 + NBRC 10241	128	216	160	437	107	189	133	293	324	540	634	317	519	246	623	96	518	1,767	1,381	909	593									
<i>Acinetobacter ruginigena</i>	5	42	20	12	4	15	23	13	22	13	15	13	9	1	19	15	7	19	82	78	28									
<i>Acinetobacter ruddii</i>	8	2	1	12	0	1	3	10	3	3	4	2	2	1	5	1	5	2	2	2	2									
<i>Acinetobacter schindleri</i>	2,855	11,733	3,435	19,448	2,206	2,759	3,604	11,682	3,492	5,147	14,444	5,655	8,020	6,682	18,329	1,591	6,464	15,773	14,298	14,174	12,712									
<i>Acinetobacter septicus</i>	99	350	231	541	119	188	243	226	174	280	729	346	729	498	432	75	461	1,233	794	1,316	1,446									
<i>Acinetobacter shoenleii</i>	145	383	297	671	95	223	215	323	328	722	1,736	884	1,679	950	620	105	1,126	2,182	2,162	2,382	2,310									
<i>Acinetobacter soli</i>	246	607	236	1,034	189	155	202	634	241	194	885	142	254	278	1,157	110	274	675	478	604	583									
<i>Acinetobacter townii</i>	2,105	7,005	3,049	11,406	1,743	2,169	2,686	5,699	3,961	3,851	6,896	1,869	2,445	1,753	10,347	1,504	2,761	13,095	4,695	5,773	4,760									
<i>Acinetobacter ursingii</i>	1,626	3,538	1,833	5,800	1,173	1,446	1,567	3,604	1,865	1,494	4,194	1,628	2,806	2,209	5,584	734	2,694	6,476	5,389	5,717	5,304									
<i>Acinetobacter variabilis</i>	844	2,506	998	5,090	813	725	736	2,520	972	688	2,725	778	1,201	885	4,841	511	960	3,169	1,683	2,098	1,695									
<i>Acinetobacter venetianus</i>	769	3,828	996	6,260	653	599	517	3,730	689	287	1,456	363	500	266	5,250	457	614	2,039	979	1,011	416									
<i>Acinetobacter vivianii</i>	55	156	143	250	60	96	109	163	112	152	316	93	205	87	212	58	374	946	1,411	486	115									
<i>Acinetobacter wanghuai</i>	44	127	116	173	49	80	108	67	96	172	297	128	428	237	173	29	607	501	565	995	605									
<i>Acinetobacter wuhanensis</i>	73,560	57,987	65,369	49,758	16,222	13,864	16,719	143,681	358,413	324,929	230,801	46,406	16,269	11,077	408,642	58,224	122,116	217,158	81,565	153,399	25,135									
<i>Acinetobacter</i> sp. 10FS3-1	3,377	6,415	2,542	9,386	1,471	2,162	3,339	9,349	3,129	3,576	7,241	1,714	2,614	3,465	17,078	1,184	2,934	10,767	6,121	10,532	7,799									
<i>Acinetobacter</i> sp. Ac-14	6	16	14	15	11	16	5	11	15	6	20	29	4	6	27	3	29	91	71	71	9									
<i>Acinetobacter</i> sp. ACN181	68	148	102	336	61	85	106	169	139	145	421	100	276	161	322	42	507	912	422	619	441									
<i>Acinetobacter</i> sp. ACN262	2,249	8,834	3,146	17,073	2,518	2,723	2,789	7,183	2,985	2,246	8,778	3,380	5,733	4,345	12,246	1,659	3,976	18,921	11,963	23,132	11,155									
<i>Acinetobacter</i> sp. AP47	10	24	14	67	6	11	4	19	6	0	8	2	0	0	29	3	3	7	2	4	2									
<i>Acinetobacter</i> sp. ASP199	69	135	64	208	49	69	82	116	197	134	223	44	157	108	286	49	110	317	213	486	404									
<i>Acinetobacter</i> sp. BEC1-S18-ESBL-01	13	43	20	73	26	16	8	41	21	24	23	10	18	5	59	8	32	104	113	119	7									
<i>Acinetobacter</i> sp. BH54	22	31	23	84	8	20	10	71	144	108	62	56																		

<i>Pseudomonas wadsworthensis</i>	7	18	66	187	36	58	58	45	139	415	2,446	934	1,084	839	96	18	518	1,201	1,597	686	1,277
<i>Pseudomonas gingivalis</i>	11	13	18	79	16	31	38	19	86	230	1,247	487	478	383	45	20	284	628	808	338	624
<i>Pseudomonas aeruginosa</i>	23	29	116	29	30	35	19	54	21	40	43	32	21	26	91	17	37	56	24	38	43
<i>Pseudomonas selesnickii</i>	9	14	54	16	9	15	14	15	12	21	55	26	30	21	27	2	22	50	45	23	49
<i>Pseudomonas stutzeri</i>	25	42	73	249	38	44	28	173	1,709	3,251	2,397	1,764	596	215	244	530	1,166	1,350	1,541	467	333
<i>Pseudomonas silvestris</i>	47	60	250	55	56	81	53	51	53	99	78	68	35	64	111	25	65	87	81	67	78
<i>Pseudomonas balerica</i> DSM 6883	57	46	88	69	42	73	57	59	44	39	35	30	32	32	135	12	35	99	38	118	56
<i>Pseudomonas luteola</i>	1	1	3	41	23	6	3	11	10	193	151	170	89	36	18	21	37	254	190	155	61
<i>Pseudomonas stutzeri</i> CCUG 29243	16	20	27	11	9	13	6	21	8	13	10	10	7	10	23	4	13	20	8	16	12
<i>Pseudomonas stutzeri</i> DSM 10781	22	40	125	41	38	29	27	54	20	55	39	46	24	15	64	6	43	49	48	54	48
<i>Pseudomonas stutzeri</i> RCH2	11	12	55	7	9	14	8	13	8	23	9	19	13	7	18	6	12	24	14	12	24
<i>Pseudomonas syringae</i> pv. <i>maulicola</i> str. ES4326	5	4	6	7	2	5	3	11	9	6	30	16	12	15	13	0	5	14	24	7	20
<i>Pseudomonas syringae</i> pv. <i>tomato</i>	207	151	209	375	77	169	128	425	59	159	442	211	226	212	689	42	280	884	364	629	260
<i>Pseudomonas thivervalensis</i>	12	13	14	23	11	8	9	21	16	27	133	54	40	34	26	4	41	65	94	49	89
<i>Pseudomonas tolosensis</i>	381	618	772	929	381	473	386	869	2,201	1,055	1,827	1,033	765	449	963	325	1,622	2,127	2,148	975	785
<i>Pseudomonas tobiensis</i>	15	45	63	32	17	30	25	29	21	38	56	27	29	29	48	11	28	77	41	51	32
<i>Pseudomonas frustae</i>	3	19	50	156	28	69	74	39	102	400	2,130	914	882	699	83	20	444	1,085	1,374	555	1,126
<i>Pseudomonas umsongensis</i>	32	21	29	36	11	8	8	27	36	44	142	65	82	56	38	3	48	54	125	55	82
<i>Pseudomonas vacuoverensis</i>	3	4	7	24	5	2	5	13	116	37	108	47	49	31	22	13	30	69	84	36	83
<i>Pseudomonas vanderleydeniana</i>	14	10	36	52	11	20	23	24	72	155	731	326	346	270	61	10	127	379	475	197	444
<i>Pseudomonas waymouthensis</i>	1	7	22	37	7	19	21	14	49	95	580	228	247	180	34	9	122	292	414	172	332
<i>Pseudomonas venusta</i>	65	67	227	81	66	98	50	85	57	97	83	57	31	48	137	31	71	103	87	80	131
<i>Pseudomonas xanthopygines</i>	16	36	59	79	19	31	31	66	163	238	847	394	444	300	55	35	240	505	583	269	522
<i>Pseudomonas xanthosoma</i>	5	12	36	84	14	29	33	18	91	168	830	405	331	252	45	21	206	429	558	260	458
<i>Pseudomonas yamanorum</i>	4	12	19	12	5	7	8	29	16	30	82	48	41	50	28	2	24	31	69	24	69
<i>Pseudomonas</i> sp. <i>62C-26</i>	3	5	34	37	17	17	23	13	25	93	486	213	189	166	20	7	95	241	336	153	231
<i>Pseudomonas</i> sp. <i>1180SL</i>	3	7	5	5	2	1	4	2	1	4	0	1	0	1	0	1	0	1	0	1	0
<i>Pseudomonas</i> sp. <i>1119349</i>	273	587	687	851	256	106	167	1,223	38,158	7,002	6,136	3,950	1,105	410	2,887	12,520	7,383	4,923	4,977	1,103	580
<i>Pseudomonas</i> sp. <i>2hn</i>	11	21	40	95	12	27	31	18	223	263	903	396	480	368	67	54	260	460	688	271	543
<i>Pseudomonas</i> sp. <i>43A</i>	9	21	41	52	12	9	27	27	141	132	357	224	135	122	50	43	155	251	320	112	167
<i>Pseudomonas</i> sp. <i>A2</i>	2	17	18	31	10	12	11	30	1,257	238	291	165	91	22	105	333	321	241	285	84	49
<i>Pseudomonas</i> sp. <i>ABCI</i>	26	26	129	36	30	26	22	38	20	60	125	69	104	57	4	85	103	77	58	133	58
<i>Pseudomonas</i> sp. <i>ADPe</i>	23	71	171	65	36	76	50	61	60	100	124	70	55	58	102	19	73	96	83	65	90
<i>Pseudomonas</i> sp. <i>AN-B15</i>	7	9	12	10	3	5	9	15	16	10	39	18	11	9	24	7	13	27	27	28	34
<i>Pseudomonas</i> sp. <i>B1107D</i>	14	30	124	18	27	49	29	42	37	51	64	60	35	33	47	10	45	62	71	43	75
<i>Pseudomonas</i> sp. <i>BIOMG18AC</i>	78	85	134	144	56	114	108	134	181	158	482	238	237	203	204	49	172	359	337	238	296
<i>Pseudomonas</i> sp. <i>BUP49</i>	19	54	73	68	25	48	44	41	571	480	687	450	263	48	66	142	542	612	527	214	80
<i>Pseudomonas</i> sp. <i>BYT-1</i>	21	24	30	74	21	23	33	93	602	205	591	389	219	179	144	111	247	417	584	167	239
<i>Pseudomonas</i> sp. <i>CC6-YY-74</i>	21	55	174	38	35	50	31	54	24	64	44	36	35	35	78	13	30	57	54	54	72
<i>Pseudomonas</i> sp. <i>CCOS-191</i>	5	24	33	57	20	35	22	15	117	219	799	365	422	258	53	49	184	445	553	266	467
<i>Pseudomonas</i> sp. <i>CFSAN084952</i>	6	6	32	108	10	11	32	13	49	84	96	65	39	390	28	9	27	53	67	64	268
<i>Pseudomonas</i> sp. <i>CP-19</i>	7	9	10	28	9	10	4	10	154	84	134	154	161	41	30	55	127	153	269	42	60
<i>Pseudomonas</i> sp. <i>CMR3c</i>	74	116	68	125	56	90	176	285	392	118	546	263	214	192	541	87	154	281	414	172	338
<i>Pseudomonas</i> sp. <i>CT14</i>	97	152	84	140	15	16	16	226	14	10	13	1	3	1	200	8	11	19	2	1	1
<i>Pseudomonas</i> sp. <i>DY-1</i>	10	28	87	20	19	22	18	25	28	53	79	27	21	33	33	12	42	70	59	55	69
<i>Pseudomonas</i> sp. <i>FOAAARGOS_761</i>	16	31	27	39	27	38	65	27	51	36	51	46	28	30	54	13	49	81	62	51	43
<i>Pseudomonas</i> sp. <i>FOH2</i>	4	9	20	48	10	9	9	18	289	153	486	262	180	78	21	68	222	505	461	141	139
<i>Pseudomonas</i> sp. <i>gcc27</i>	516	539	265	507	135	164	147	820	158	88	247	90	47	39	676	47	82	212	99	94	168
<i>Pseudomonas</i> sp. <i>HLS-6</i>	1,121	323	780	570	139	160	219	2,506	4,844	2,487	23,721	17,050	1,120	1,046	2,781	905	2,416	2,402	2,835	1,216	1,883
<i>Pseudomonas</i> sp. <i>HS-18</i>	127	249	235	337	107	148	208	238	360	779	1,165	651	467	287	322	175	1,521	1,745	932	612	380
<i>Pseudomonas</i> sp. <i>J388</i>	16	16	40	77	38	29	58	13	106	58	97	82	108	1,005	24	16	31	68	129	184	1,068
<i>Pseudomonas</i> sp. <i>MRSB602</i>	6	12	37	97	38	18	16	26	429	388	1,026	839	215	90	183	113	535	1,055	1,022	258	165
<i>Pseudomonas</i> sp. <i>MJNC1626</i>	1	9	28	23	5	6	16	18	5	36	104	46	55	53	21	4	21	55	86	40	72
<i>Pseudomonas</i> sp. <i>KU43P</i>	8	12	27	79	18	16	34	23	155	211	863	420	402	282	48	39	237	495	668	269	453
<i>Pseudomonas</i> sp. <i>LS85</i>	5	10	27	21	3	8	14	11	25	46	242	109	77	73	23	7	52	142	165	72	123
<i>Pseudomonas</i> sp. <i>Lea58</i>	3	11	28	38	19	10	9	15	191	135	457	240	194	123	37	40	206	348	374	154	175
<i>Pseudomonas</i> sp. <i>LPB268</i>	34	43	243	32	59	78	42	60	33	74	83	74	36	44	105	9	62	90	109	110	118
<i>Pseudomonas</i> sp. <i>LPH1</i>	33	35	162	43	40	65	28	44	29	56	53	54	28	32	72	12	61	66	56	57	73
<i>Pseudomonas</i> sp. <i>LS</i>	6	5	26	81	13	20	18	16	246	199	747	477	336	147	34	53	316	613	710	232	275
<i>Pseudomonas</i> sp. <i>LS44</i>	19	31	90	24	28	40	22	38	28	54	64	37	37	44	48	12	36	92	68	71	54
<i>Pseudomonas</i> sp. <i>LTGT-11-2Z</i>	61	120	1,095	1,952	437	247	116	206	13,886	11,874	9,889	12,359	4,847	1,203	422	2,157	2,045	22,525	20,646	4,055	1,477
<i>Pseudomonas</i> sp. <i>M1</i>	27	66	70	63	27	61	53	40	35	67	115	64	78	62	66	7	67	119	88	75	102
<i>Pseudomonas</i> sp. <i>M30-35</i>	10	11	10	11	4	2	3	21	1	3	3	8	3	2	15	3	2	5	3	2	2
<i>Pseudomonas</i> sp. <i>Marseille-Q3773</i>	4	5	28	46	12	14	17	13	67	101	411	230	219	139	29	14	136	243	358	139	240
<i>Pseudomonas</i> sp. <i>MM211</i>	6	12	34	9	12	9	6	11	10	36	44	23	17	27	28	5	26	31	29	17	41
<i>Pseudomonas</i> sp. <i>MP05</i>	55	67	93	69	28	64	55	57	107	115	146	115	73	57	108	16	127	220	129	123	94
<i>Pseudomonas</i> sp. <i>MIRCP1333</i>	315	408	844	481	245	301	329	531	384	791	886	443	270	260	719	128	465	909	611	416	429
<i>Pseudomonas</i> sp. <i>MIRSN12121</i>	46	68	66	101	51	33	42	98	104	83	277	142	117	84	166	24	96	184	252	103	126
<i>Pseudomonas</i> sp. <i>MSpm1</i>	22	31	111	24	34	32	21	37	21	44	66										