Supplementary Materials

Table S1. Water quality at different stages along the treatment processes make changes of the toxin dataset.

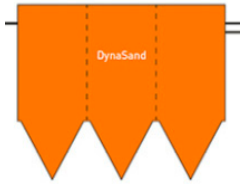
Treatment train	Raw			Pretreatment					Artificial recharge Pond					Well water				
				After contact filter tre		After control treatment			Contact filter pond		Control treatment pond			Contact Filter Well		Control Filter Well		
Water quality																		
	Avergae	Min-Max	No.	Avergae	Min-Max	Avergae	Min-Max	No.	Avergae	Min-Max	Avergae	Min-Max	No.	Avergae	Min-Max	Avergae	Min-Max	No.
TOC	6.25	4.3-9.1	n=6	2.75	2-3.3	6.7375	5.5-8.5	n=8	2.82	2.1-3.2	6.67	5.1-7.4	n=6	2.1	1.9-2.5	3.01	2.1-3.5	n=7
COD	4.955	4.13-5.64	n=10	1.70	1.42-2.36	4.76	4.03-5.51	n=14	1.71	1.27-2.42	5.333	4.27-6.37	n=8	1.26	1-1.55	1.55	0.67-12.28	n=8
Turbidity	4.59	(2.4-6.5)	n=9	1.01	0.3-5.82	3.76	2.7-4.5	n=9	1.3	0.25-5.75	4.64	(3-14.2)	n=9					
UV (A254 nm)	17.19	(15.9-17.7)	n=9	5.51	4.53-7.15	16.44	15.1-17.1	n= 13	5.18	4.7-5.75	16.33	(15.1-16.4)	n=8	4.42	1.14-6.93	5.16	1.22-7.24	n=9
Colour	2.09	1.56-2.18	n=9	0.33	0.24-0.63	1.46	1.01-1.94	n= 13	0.51	0.211-0.593	1.56	1.14-1.72	n=8	0.87	0.24-1.32	0.38	0.04-1.41	n=8
TP	0.096	0.041-0.194	n=11	<0.02	<0.02	0.0694	0.02-0.106	n= 15	<0.02	0-0.018	0.100	0.06-0.216	n=9	<0.02	<0.02	<0.02	<0.02	n=9
Ammonium	0.069	0.014-0.234	n=9	0.057	0.024-0.1896	0.052	0.018-0.164	n= 13	0.044	0.011-0.096	0.049	0.03-0.099	n=6	0.0082	0-0.021	0.0075	0-0.02	n=5
Nitrate	0.3687	0.203-0.989	n=10	0.516	0.035-1.6	0.559	0.207-1.66	n=15	0.392	0.206-1.08	0.318	0.143-1.02	n=6	0.55125	0.149-1.63	0.833	0.277-1.56	n=8
Orthphosphate	0.1685	0.049-1.02	n=10	<0.02	<0.02	0.0694	0.02-0.106	n=15	<0.02	0-0.019	0.100	0.06-0.216	n=9	0.0488	<0.02	<0.02	<0.02	n=8
Cyanobacteria	Present			NO		present			NO		present a lot							
Microcystin	0.138	0-1	n=30	0.053 n=33	0.01-0.27	0.132 n=34	0.01-1.05		0.0548	0.01-0.30	0.138	0.01-0.75	n=30	0.026	0-0.09	0.029	0-0.24	n=19

Table S2. Global amount of cyanobacteria in different steps of the pre-treatment process.

	Raw	After control treatment	After contact filter treatment	Control treatment pond	Contact filter pond	Contact filter well	Control filter well
24th of July	x				x		
21st of Aug.	x					x	x
26th of Aug.							
29th of Aug.						x	x
3rd of Sep.	x						
15th of Sep.						x	x
17th of Sep.							
1st of Oct.				x	x	x	x
6th of Oct.	x					x	x
15th of Oct						x	x
20thof Oct						x	x

	Extensive amount to blooms
	Large amount
	Medium
	few to medium
	Zero to few
x	No samples

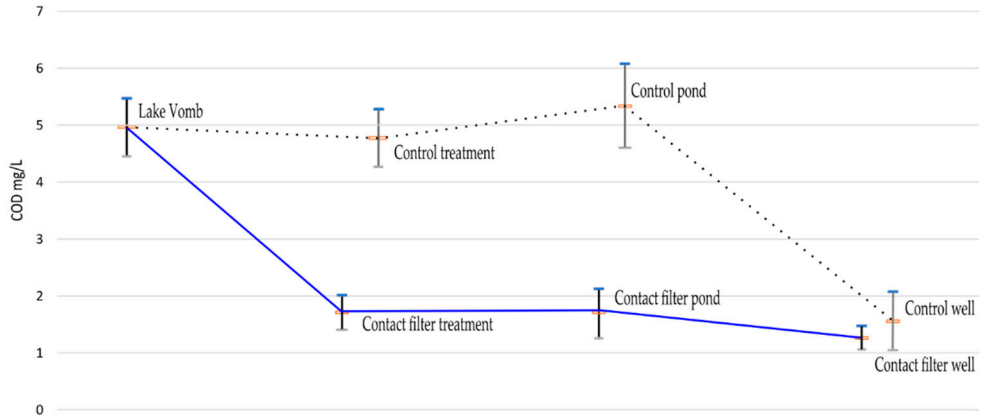


Figure S1. COD measurements at different stages along the two treatment processes (mg/L) (The middle bar is the mean value and the top and lower bars show the standard deviation. The dotted line is the contact filter treatment process and the solid line is the control treatment process.).

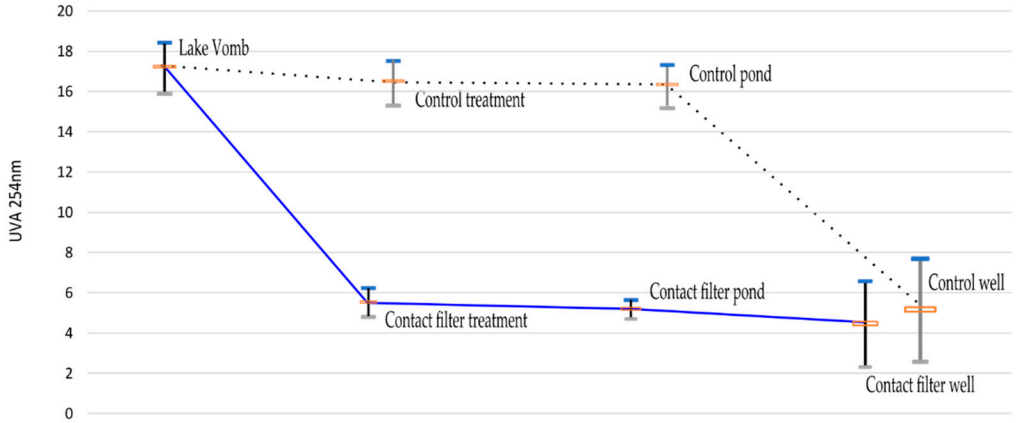
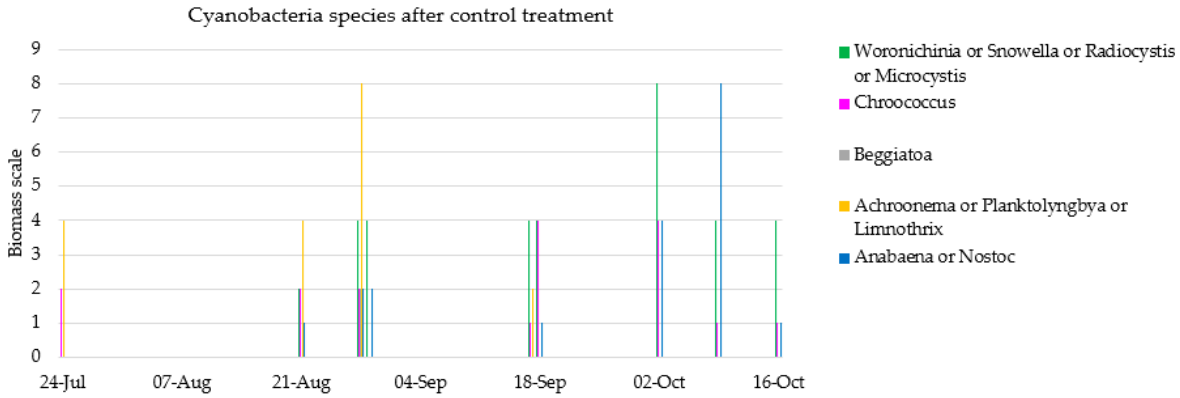


Figure S2. UVA 254 nm at different stages along the two treatment processes (The middle bar is the mean value and the top and lower bars show the standard deviation. The dotted line is the contact filter treatment process and the solid line is the control treatment process.).



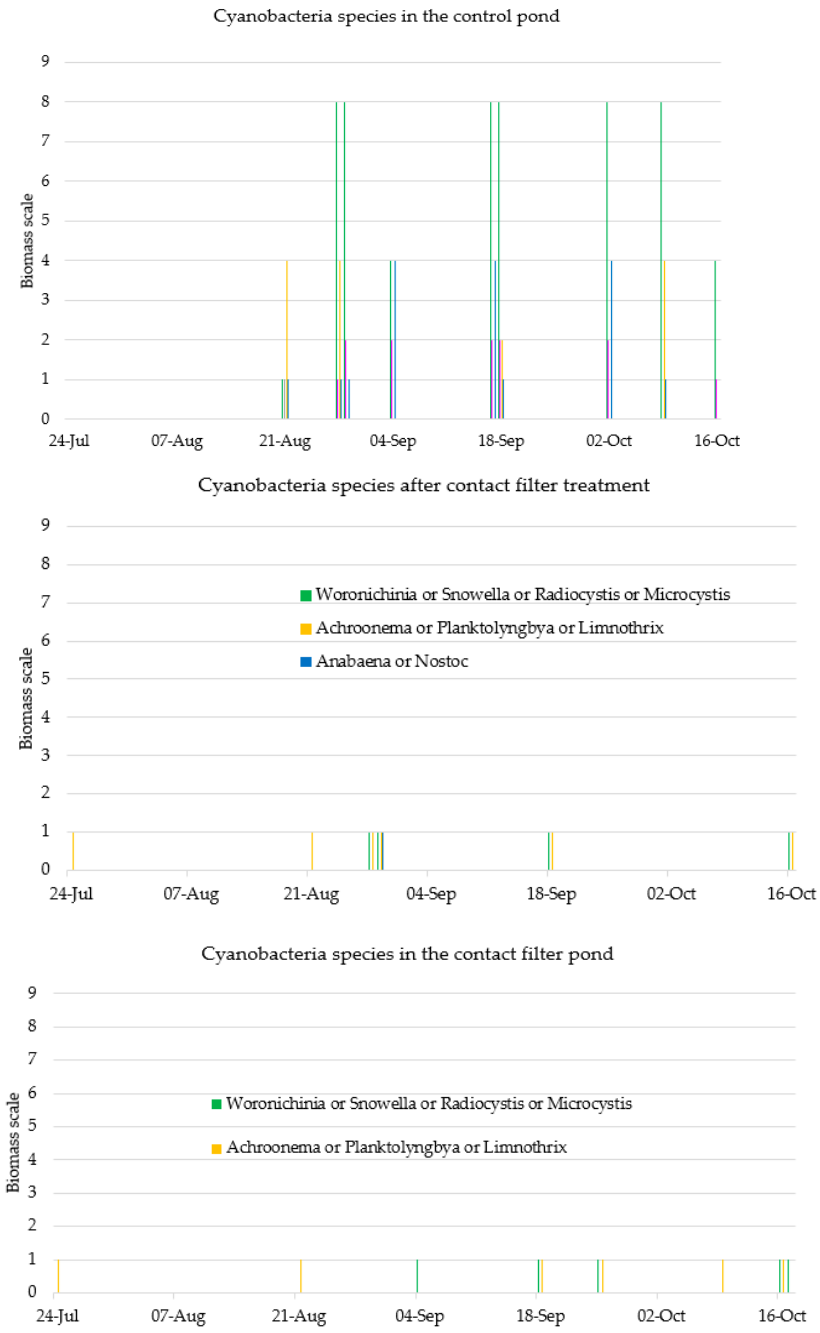


Figure S3. Changes of algae types in the two treatment processes, the biomass scale is the area covered by algae i.e. 1 = 10%, 2 =20% and so on.

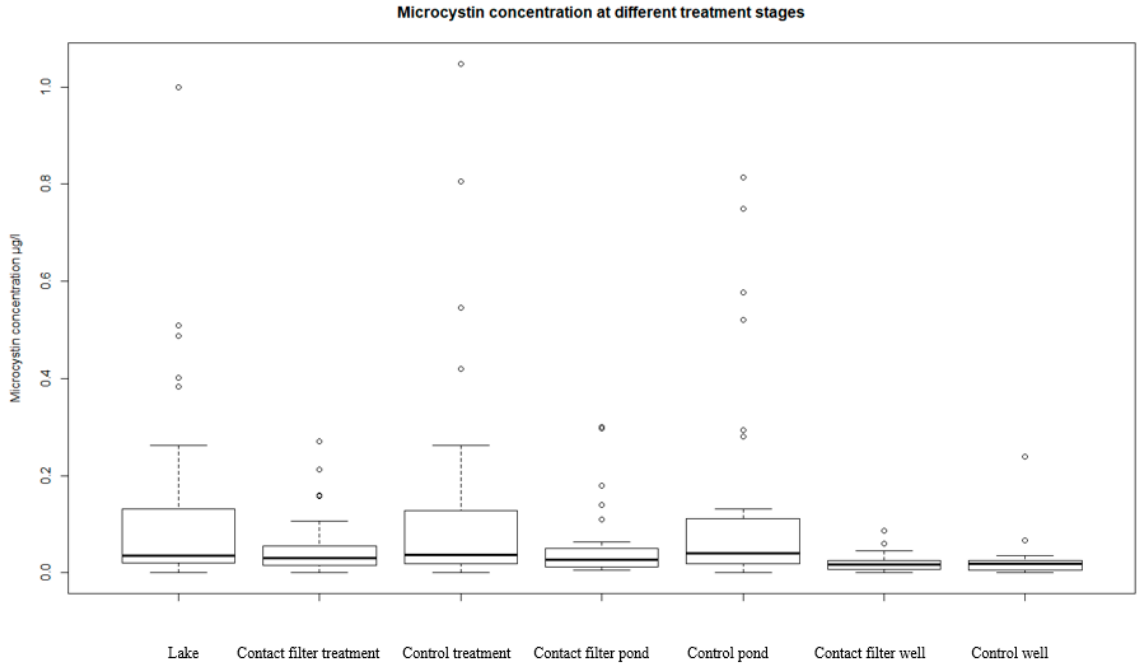


Figure S4. Microcystin concentration at different.