

Supplementary material

for:

Seasonal and spatial evolution of trihalomethanes in a drinking water distribution system according to the treatment process

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The Supplementary Information provides additional relevant details of this study, including:

- Table S1 Average Value TTHM, Temperature (T), pH, DOC, accumulated dose (D) and contact time (t)
- Table S2 Correlation Matrix.
- Fig. S1 Proliferation of algae at the Pulsator clarifier with water treatment process P4.
- Fig. S2 Representation of predicted and measured THMs from multiple regression empirical models.

Table S1 Average Value TTHM, Temperature (T), pH, DOC, accumulated dose of chlorine (D) and contact time (t)

		HRT							LRT					
		L (Km)	t (day)	T °C	pH	DOC mg/L	D mg/L	TTHM µg/L	t (day)	T °C	pH	DOC mg/L	D mg/L	TTHM µg/L
P1	Alj WTP	0	0.00	22.07	7.20	3.58	5.54	123.73	0.00	15.53	7.58	3.4	5.39	107.83
	SB	34	0.93	23.57	7.57	3.57	6.20	126.53	1.22	15.60	7.60	3.43	5.40	108.14
	TH	55	2.44	24.07	7.65	3.23	6.91	129.01	3.29	16.00	7.63	3.22	6.03	131.98
	CR	71	7.57	24.13	7.80	3.13	9.36	133.53	9.94	15.97	7.80	3.03	7.53	124.79
P2	Alj WTP	0	0.00	22.55	7.40	3.47	5.30	43.55	0.00	13.38	7.35	4.03	4.83	56.75
	SB	34	0.91	24.73	7.67	3.27	6.25	79.17	1.21	12.67	7.55	3.73	5.27	61.40
	TH	55	2.40	25.07	7.83	3.20	7.06	95.47	3.2	13.17	7.80	3.56	5.83	73.67
	CR	71	7.53	25.00	8.08	3.05	9.70	89.23	9.91	14.07	7.98	3.00	7.42	72.03
P3	Alj WTP	0	0.00	25.47	7.30	2.90	4.68	38.43	0.00	13.38	7.28	2.95	4.58	36.82
	SB	34	0.91	26.57	7.43	2.60	5.48	45.87	1.19	13.67	7.40	2.80	4.43	47.80
	TH	55	2.39	28.13	7.57	2.40	7.08	61.27	3.15	14.27	7.53	2.63	5.04	53.20
	CR	71	7.46	27.50	7.77	2.13	9.59	58.93	9.89	16.00	7.80	2.43	6.60	62.57
P4	Alj WTP	0	0.00	22.93	6.87	3.38	2.78	37.29	0.00	16.83	6.74	4.58	2.48	26.42
	SB	34	0.90	23.87	6.93	3.10	3.46	53.53	1.19	16.50	6.87	3.84	3.00	27.88
	TH	55	2.37	24.43	7.15	2.77	4.26	64.73	3.14	17.03	6.88	3.21	3.62	33.53
	CR	71	7.46	25.07	7.37	2.50	6.58	64.14	9.88	17.77	7.12	2.87	5.13	35.30

Alj WTP: Treated water WTP outside; SB: San Bartolomé Reservoir; TH: Tharsis Reservoir; CR: Cabezas Rubias Reservoir.

*HRT: Higher Range Temperature: (May,Jun,Jul,Aug,Sep,Oct).

*LRT: Lower Range Temperature: (Jan,Feb,Mar,Abr,Nov,Dec).

D: Accumulated Dose of chlorine: accumulated dose of chlorine in water distribution system.

Table S2 Correlation Matrix.

		HRT				LRT			
		P1	P2	P3	P4	P1	P2	P3	P4
THM-T	r	0.649	0.732	0.817	0.861	0.927	0.751	0.705	0.642
	p	0.022	0.007	0.001	0.001	0.0001	0.005	0.001	0.024
THM-pH	r	0.880	0.805	0.871	0.815	0.618	0.862	0.871	0.746
	p	0.0001	0.002	0.0001	0.001	0.032	0.0001	0.0001	0.005
THM-DOC	r	-0.902	-0.626	-0.757	-0.656	0.704	-0.578	-0.584	-0.856
	p	0.0001	0.03	0.004	0.021	0.011	0.049	0.046	0.0001
THM-D	r	0.581	0.628	0.677	0.745	0.658	0.578	0.704	0.865
	p	0.047	0.029	0.016	0.005	0.021	0.049	0.011	0.0001
pH-D	r	0.545	0.916	0.925	0.932	0.586	0.891	0.757	0.764
	p	0.047	0.001	0.0001	0.001	0.023	0.0001	0.004	0.004
T-D	r	0.377	0.392	0.643	0.806	0.636	0.337	0.645	0.484
	p	0.226	0.208	0.024	0.002	0.026	0.284	0.023	0.111

r: correlation coephicent, p: pearson coephicent.

HRT: May,Jun,Jul,Aug,Sep,Oct; LRT: Jan,Feb,Mar,Apr,Nov,Dic.

D: Dose chlorine: accumulated dose of chlorine in water distribution system.

Fig. S1 Proliferation of algae at the Pulsator clarifier with water treatment process P4.

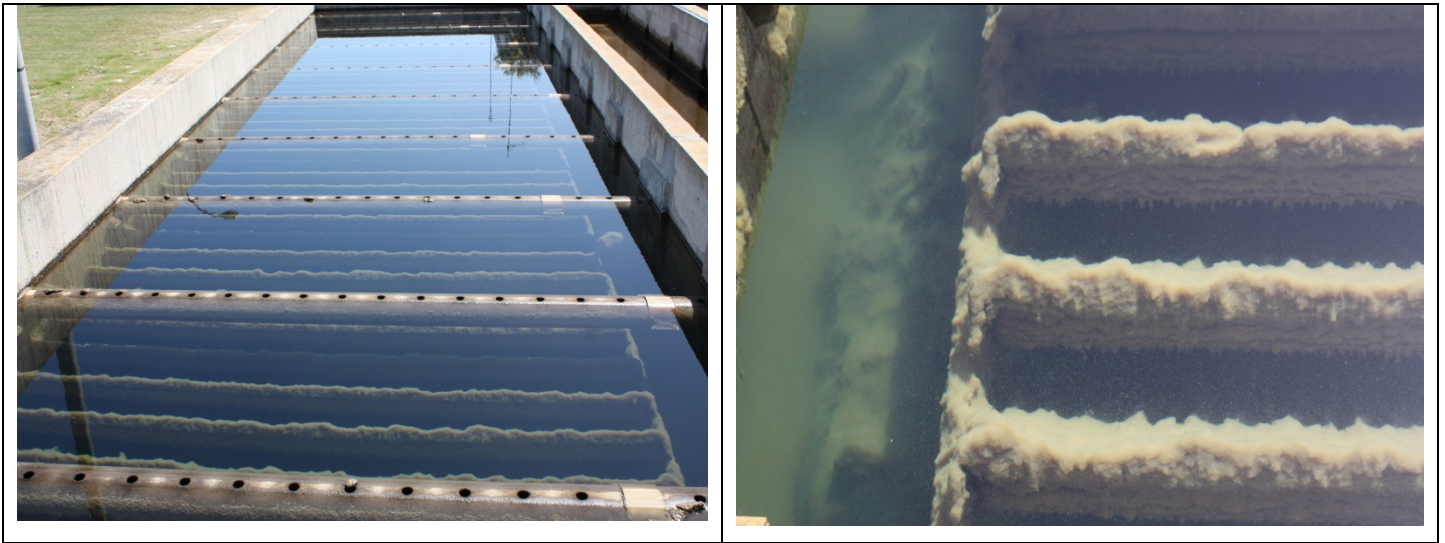


Fig. S2 Representation of predicted and measured THMs from multiple regression empirical models.

