Supplemental Information

Effect of time and temperature on SARS-COV-2 in municipal wastewater conveyance systems

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Data Set S1: SS and JI parameter and concentration data used for analysis.

Table S1: Primer/Probe Sequences for ddPCR. Final concentrations indicated in SI table 3.

Target	Primer/Probe Sequence (5'-3')	Supplier	Ref
SARS-CoV-2 N1	F: GACCCCAAAATCAGCGAAAT	Eurofins	[3]
	R: TCTGGTTACTGCCAGTTGAATCTG	Eurofins	
	P: FAM/ACCCCGCAT/ZEN/TACGTTTGGTGGACC/lABkFQ	IDT	
SARS-CoV-2 N2	F: TTACAAACATTGGCCGCAAA	Eurofins	[3]
	R: GCGCGACATTCCGAAGAA	Eurofins	
	P: HEX/ACAATTTGCCCCCAGCGCTTCAG/BHQI and HEX/ACAATTTGC/ZEN/CCCCAGCGCTTCAG/lABkFQ	IDT	
BCoV	F: CTGGAAGTTGGTGGAGTT	IDT	[1]
	R: ATTATCGGCCTAACATACATC	IDT	
	P: /FAM/CCTTCATAT/ZEN/CTATACACATCAAGTTGTT/IA BkFQ/	IDT	
BRSV	F: GCAATGCTGCAGGACTAGGTATAAT	IDT	[2]
	R: ACACTGTAATTGATGACCCCATTCT	IDT	
	P: /HEX/ACCAAGACT/ZEN/AGTATGATGCTGCCAAAGCA/IABkFQ/	IDT	
PMMoV	F: GAGTGGTTTGACCTTAACGTTGA	IDT	[4]
	R: TTGTCGGTTGCAATGCAAGT	IDT	
	P: FAM/CCTACCGAAGCAAATG/MGBNFQ/	Applied Biosystems	

Table S2: Estimated travel times using approximation of most similar legs. All legs used for this analysis were in urban areas. The average slope and average diameter are both listen in inches.

Leg	Slope (in.)	Diameter (in.)	Matched to	Slope (in.)	Diameter (in.)
B1	0.05	41	R2	0.04	43
ST	0.08	50	D3	0.07	44
U1	0.01	36	U1	0.03	34
XB	0.17	27	SB	0.23	33
XT	0.06	61	Q	0.05	46
R4	0.07	48	R2	0.04	43

Table S3: Estimated travel times accounting for pipe diversions.

Plant	Wet Conditions*	Wet no Diversion	Ave Conditions	Dry Conditions
JI	2.5	3.74	7.45	27.64
SS	9.44	9.19	22.16	109.13

*Pipe diversions account for a 50% decrease in JI acreage and 10% increase in SS acreage

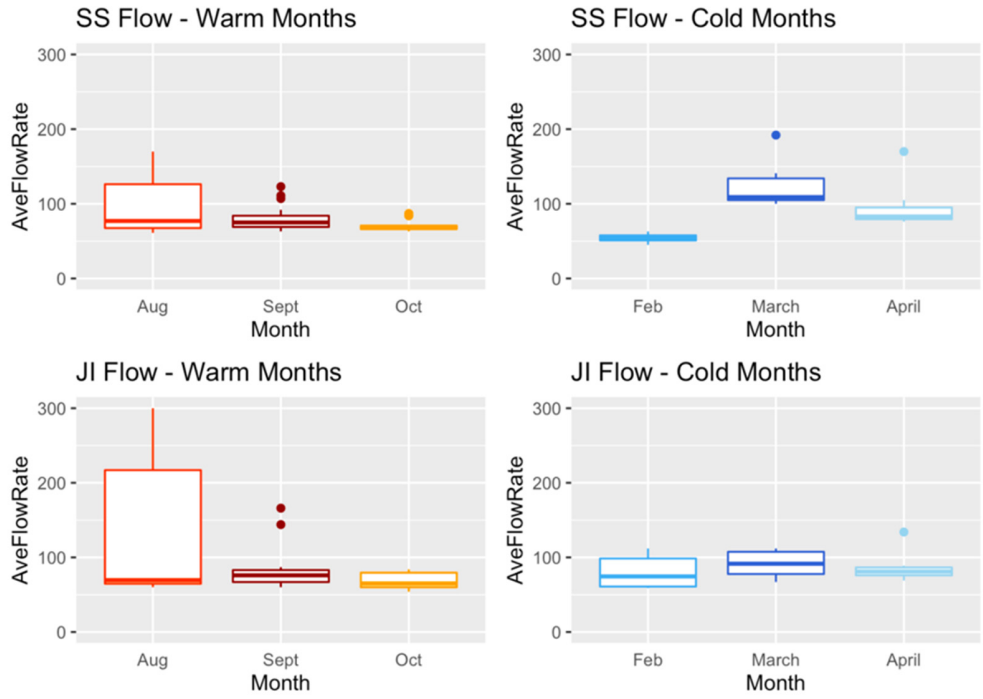

Figure S1: The Daily Average Flow measurements (MGD) matching the date of sample collection in SS (top) and JI (bottom) during warmest (left) and coolest (right) months.

References

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