

1 Supplementary Material

Table S1: Changes in various LOWESS-smoothed weather records, 1890-2019.

	Annual	Winter	Spring	Summer	Autumn
Annual and Seasonal Weather					
Maximum Temperature (°C)	1.3±0.2	1.7±0.3	0.7±0.5	0.8±0.2	1.5±0.4
DTR (°C)	-1.0±0.2	-1.3±0.4	-1.2±0.3	-0.4±0.3	-0.2±0.3
Minimum Temperature (°C)	2.3±0.2	3.0±0.5	2.0±0.4	1.5±0.2	1.8±0.3
Rainfall (mm)	46.3±35.3	21.5±8.1	20.6±28.0	-42.4±23.1	58.3±10.2
Snowfall (cm)	-20.1±18.2	-24.9±9.6	2.8±6.2	—	2.5±3.4
Growing season days	23.3±4.2	—	—	—	—
Frost-free days	12.7±3.0	—	—	—	—
Extreme Weather					
Maximum Temperature (events)	—	0.4±0.6	2.8±0.4	1.3±0.4	0.6±0.7
Minimum Temperature (events)	—	-0.9±0.5	-0.5±0.9	-1.0±0.4	-1.9±0.5
Rainfall (events)	—	-0.3±0.2	0.0±0.4	-0.3±0.5	1.5±0.3
Snowfall (events)	—	-1.3±0.5	0.3±0.1	—	0.0±0.0

Table S2: Slopes for seasonal temperature comparisons (ΔT) between Ottawa, ON, and each of Belleville, ON, Morrisburg, ON, and Chelsea, QC maximum and minimum temperature time series. Slopes are in $\Delta^\circ\text{C}/\text{year}$, values indicating a significant difference between slopes ($p < 0.05$) are highlighted in yellow. Positive values indicate Ottawa's seasonal temperature time series has a more positive rate of change than the corresponding comparative.

	Winter	Spring	Summer	Autumn
Maximum Temperature				
Ottawa – Belleville	0.0103	0.0043	0.0049	0.0070
Ottawa – Morrisburg	0.0143	0.0044	-0.0014	0.0142
Ottawa – Chelsea	0.0128	0.0031	-0.0048	0.0094
Minimum Temperature				
Ottawa – Belleville	0.0134	0.0036	0.0045	0.0007
Ottawa – Morrisburg	0.0240	0.0102	-0.0020	-0.0023
Ottawa – Chelsea	0.0102	0.0027	0.0238	0.0214

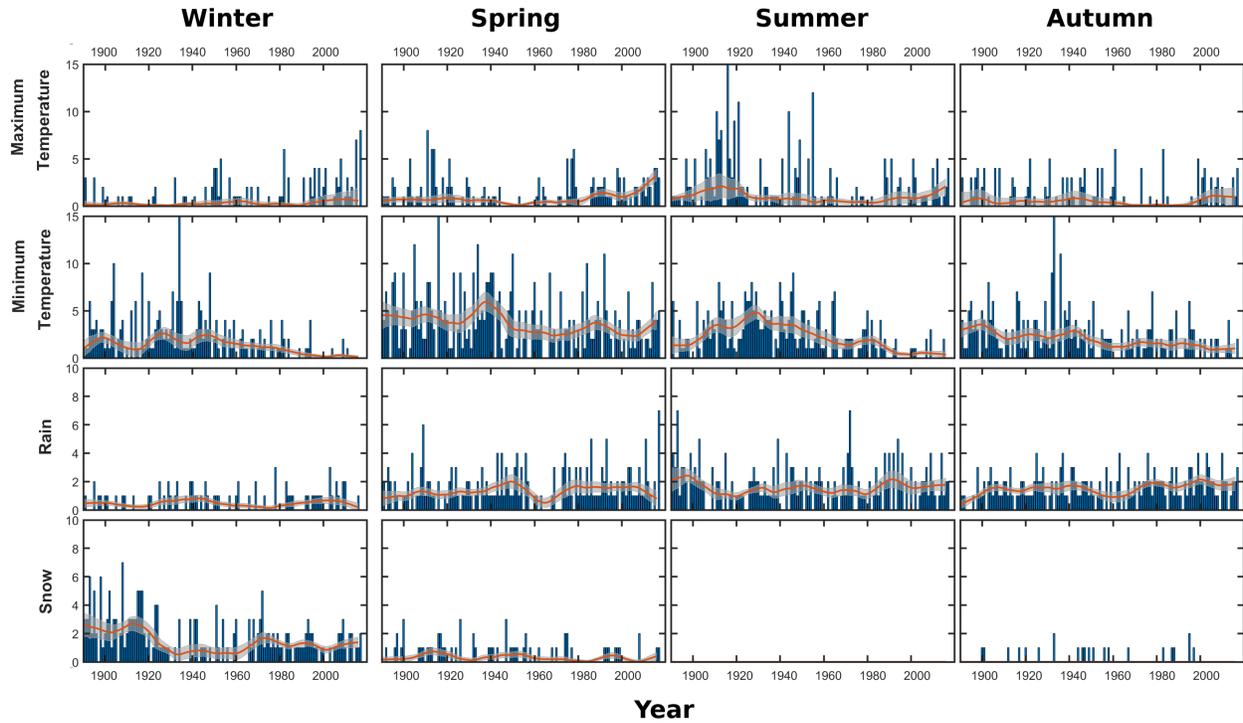


Figure S1: Smoothed (LOWESS, span=0.15 ± 95%) bar graphs for the seasonal count of extreme weather events in Ottawa, ON.

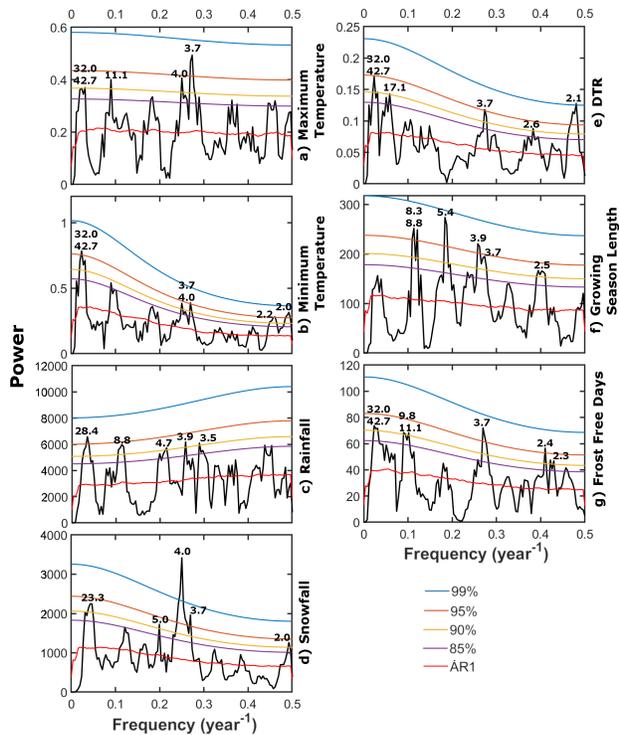


Figure S2: Spectral analysis of annual weather records with indicated red noise (AR1) and significance lines for Ottawa, ON.

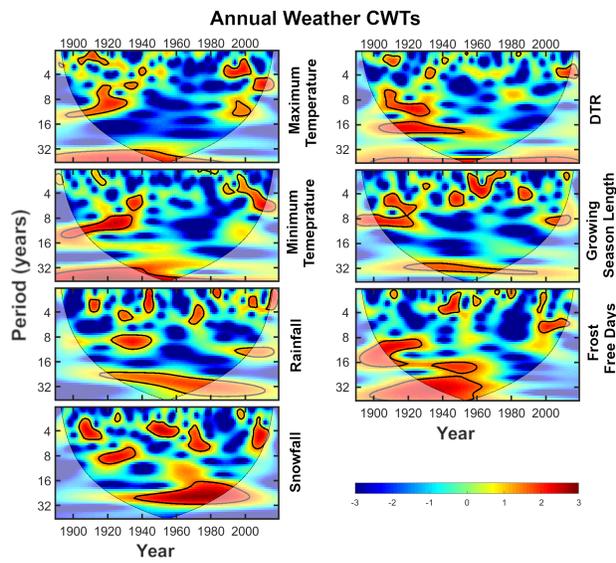


Figure S3: Continuous wavelet transforms (CWTs) of annual weather records for Ottawa, ON. Areas of high spectral density that are greater than the 90% confidence level are outlined in black.

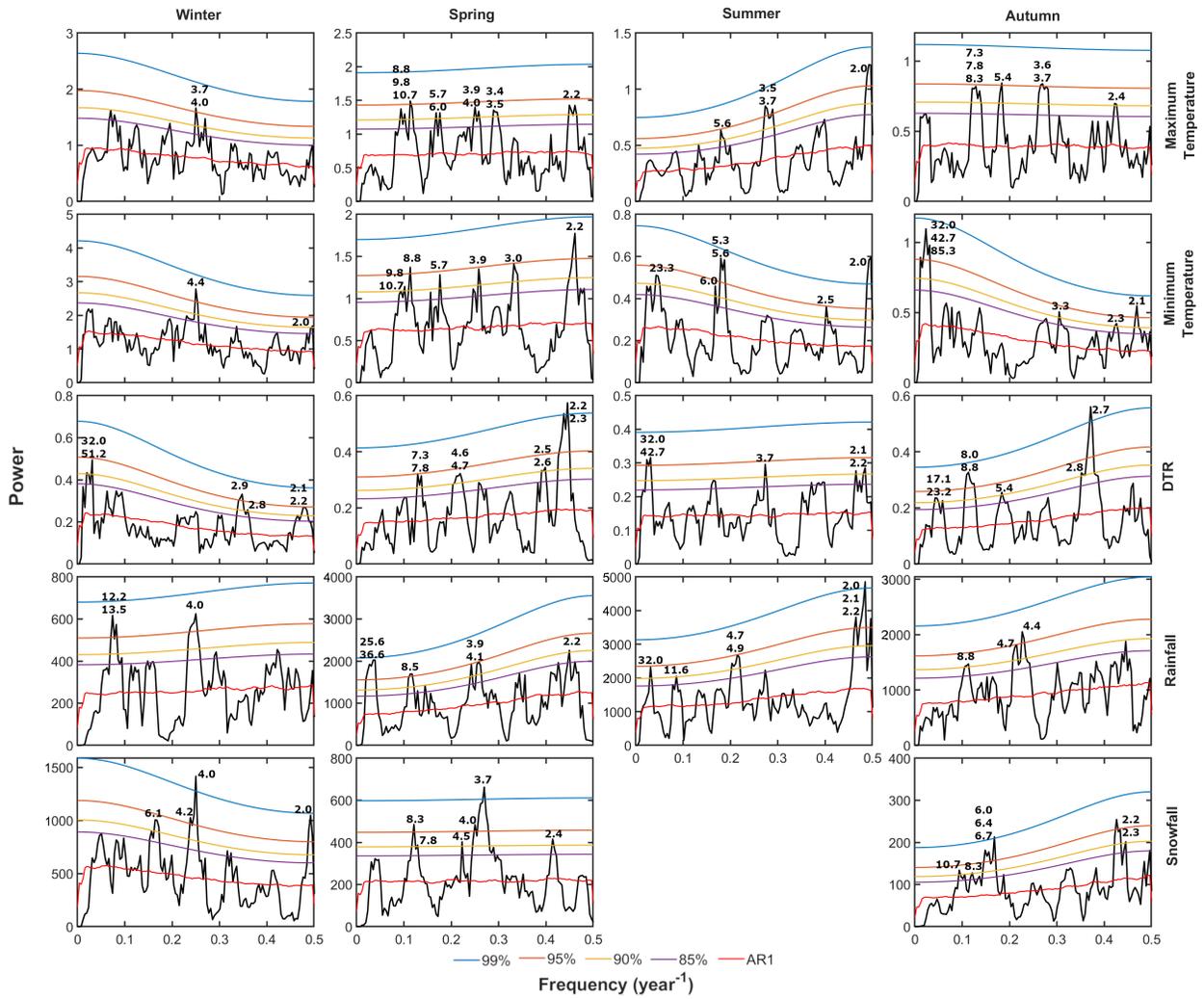


Figure S4: Spectral analysis of seasonal weather records with indicated red noise (AR1) and significance lines for Ottawa, ON.

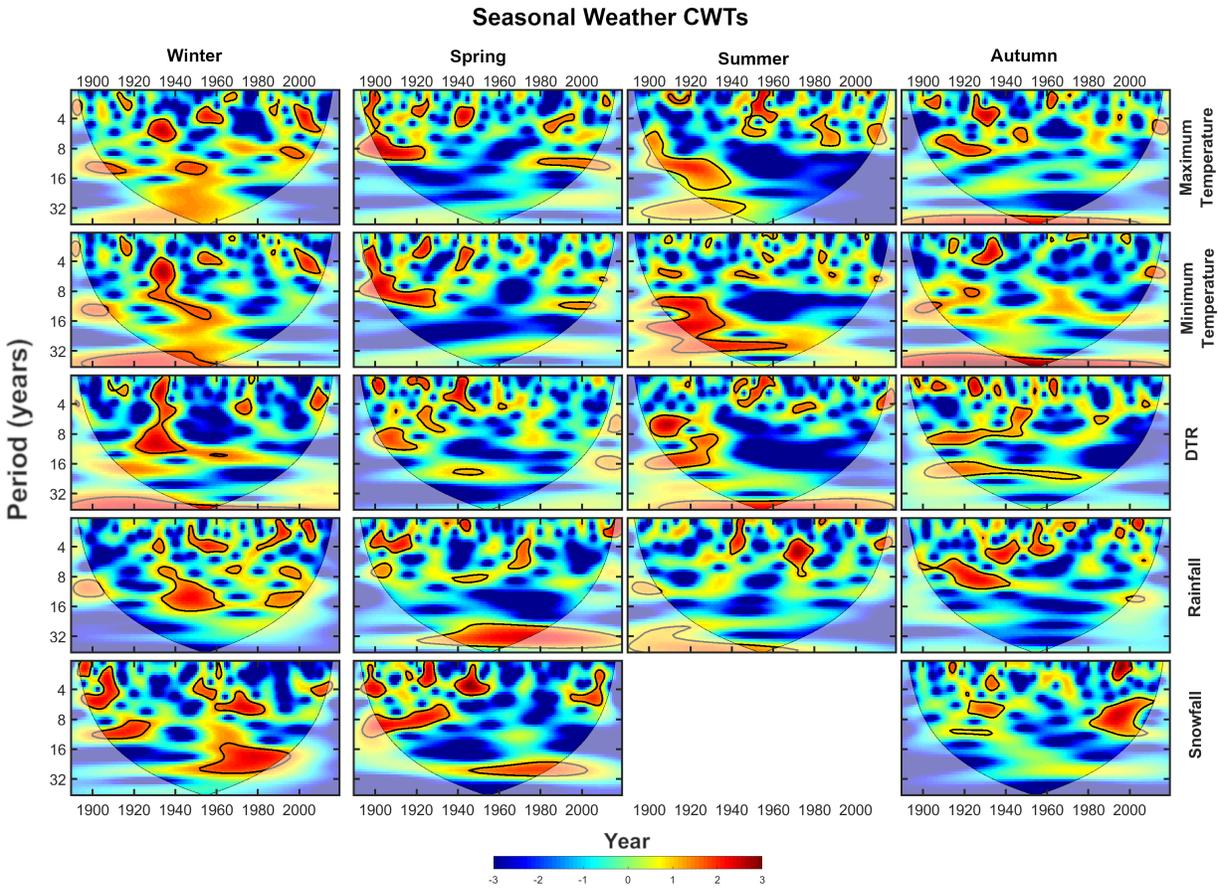


Figure S5: Continuous wavelet transforms (CWTs) of seasonal weather records for Ottawa, ON. Areas of high spectral density that are greater than the 90% confidence level are outlined in black.

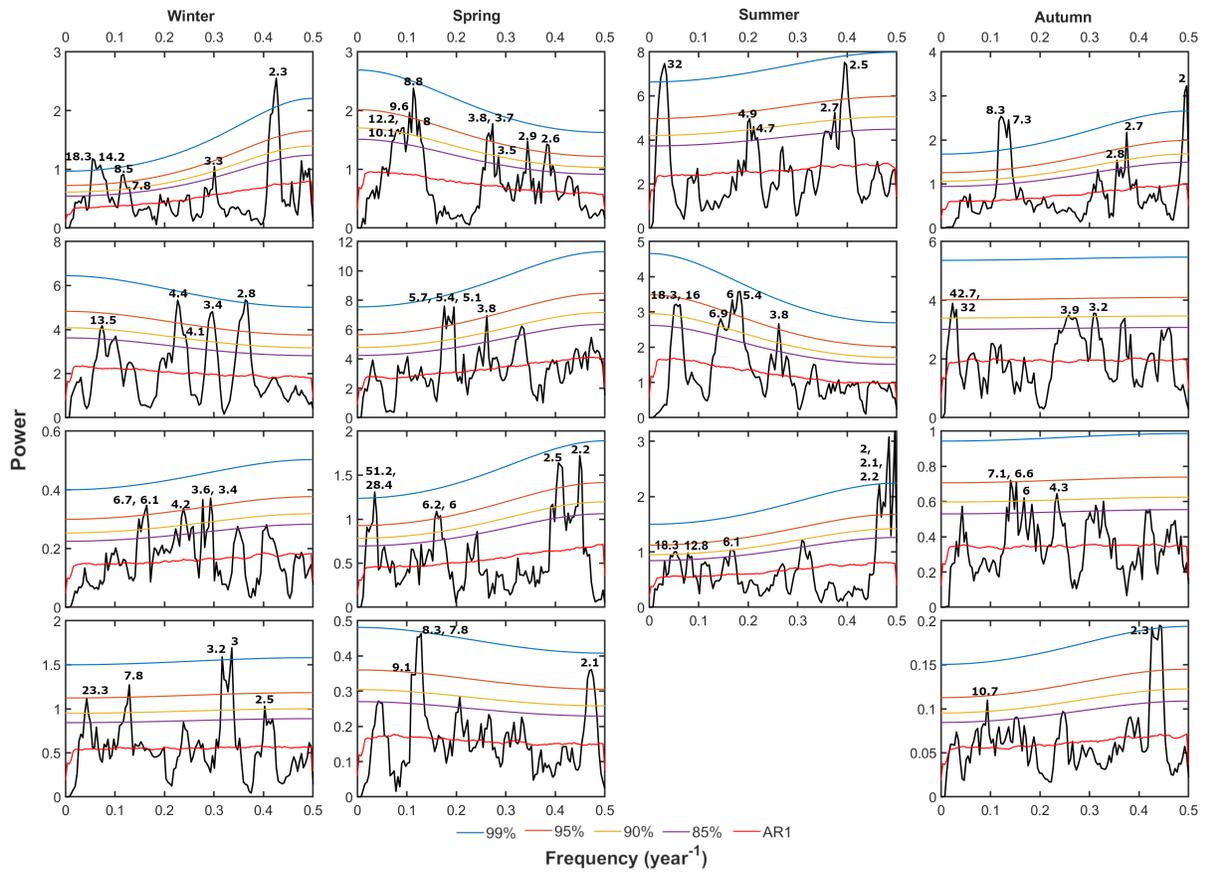


Figure S6: Spectral analysis of seasonal extreme weather records with indicated red noise (AR1) and significance lines for Ottawa, ON.

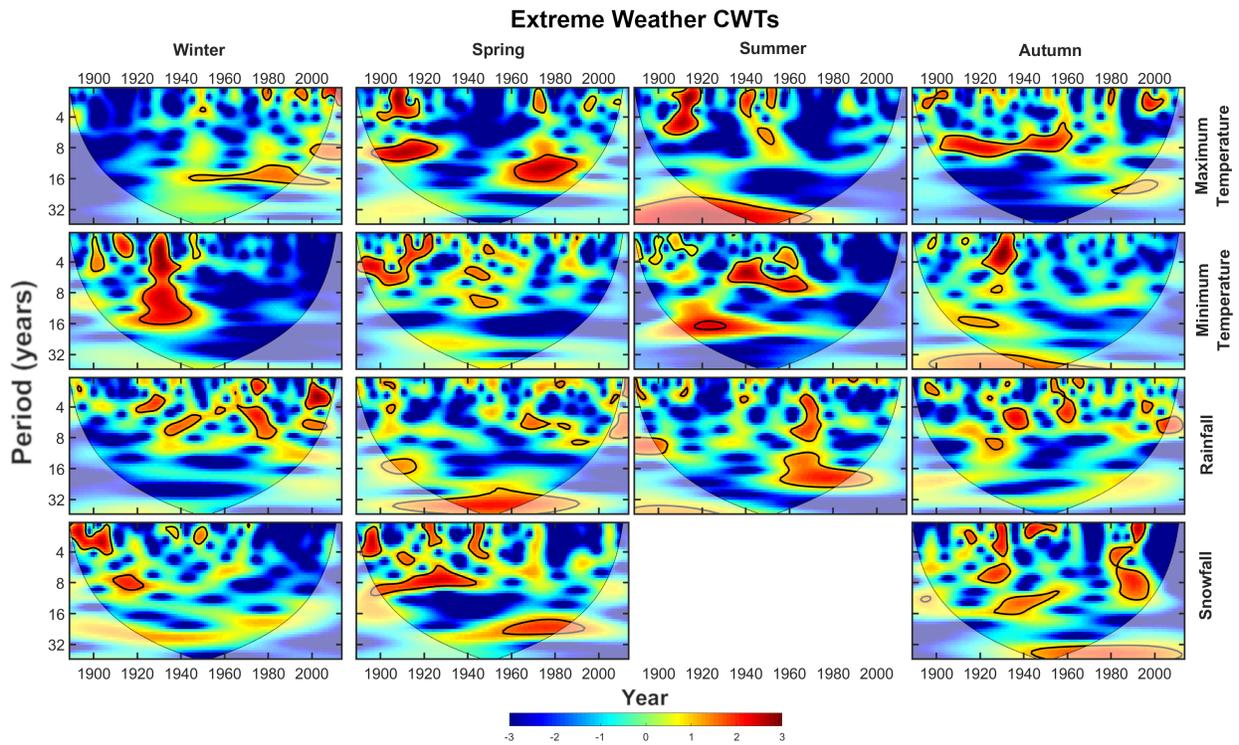


Figure S7: Continuous wavelet transforms (CWTs) of seasonal extreme weather records for Ottawa, ON. Areas of high spectral density that are greater than the 90% confidence level are outlined in black.