

Ecoblitz Weather & Flowering Phenology

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Snow Analysis

Stats

Table 1: Correlation Matrix SNOW_WC ~ TEMP_AVERAGE

Year	Fall	Winter	Spring
2021	-0.4873247	0.3311611	-0.6954612
2022	NA	0.0572723	0.0249896
2023	0.1379338	-0.3367648	-0.1822224
2024	-0.7142808	0.0477651	-0.2291605

Table 2: TukeyHSD Fall (TEMP_AVERAGE ~ factor(YEAR))

	diff	lwr	upr	p adj
2022-2021	4.4444444	0.8627107	8.0261782	0.0081472
2023-2021	0.0634921	-3.5182417	3.6452258	0.9999653
2024-2021	0.9523810	-2.6293528	4.5341147	0.9017070
2023-2022	-4.3809524	-7.9626861	-0.7992186	0.0094323
2024-2022	-3.4920635	-7.0737972	0.0896703	0.0590315
2024-2023	0.8888889	-2.6928449	4.4706226	0.9182845

Table 3: TukeyHSD Winter (TEMP_AVERAGE ~ factor(YEAR))

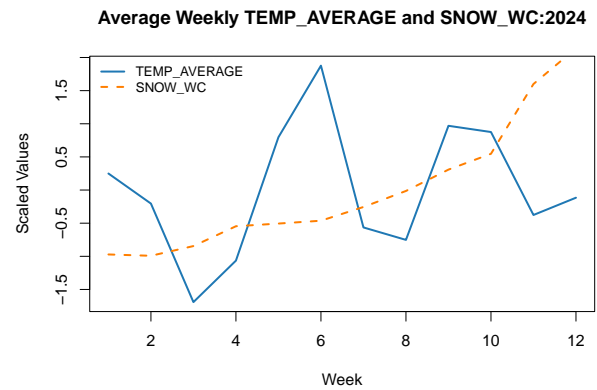
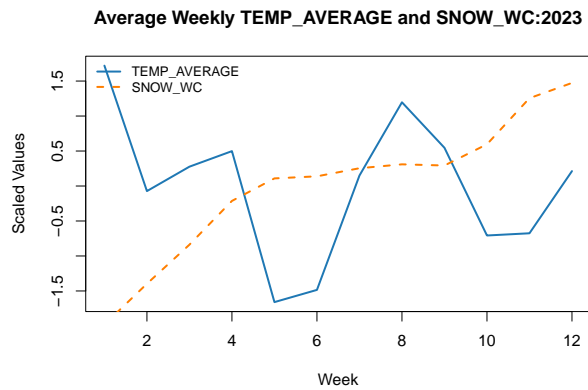
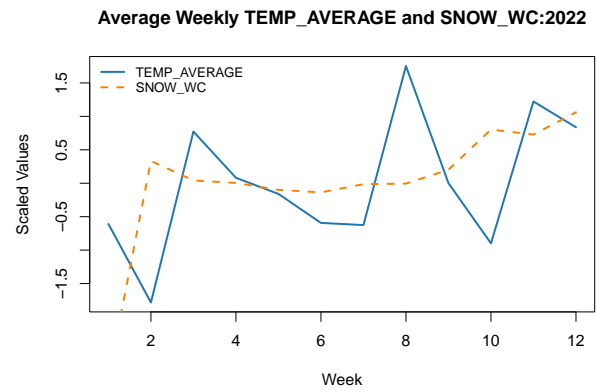
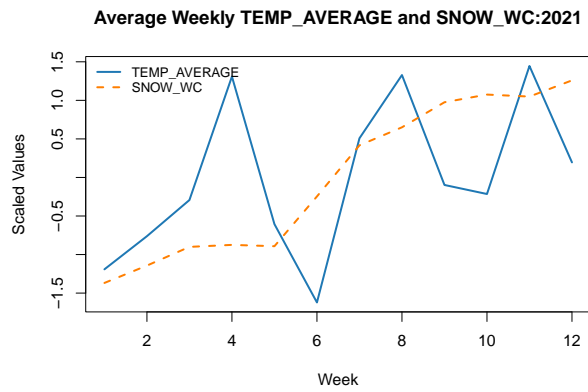
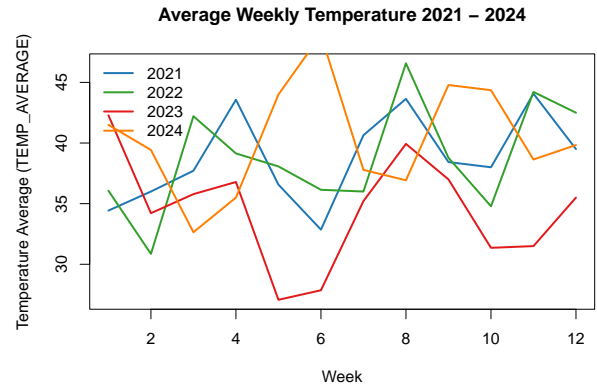
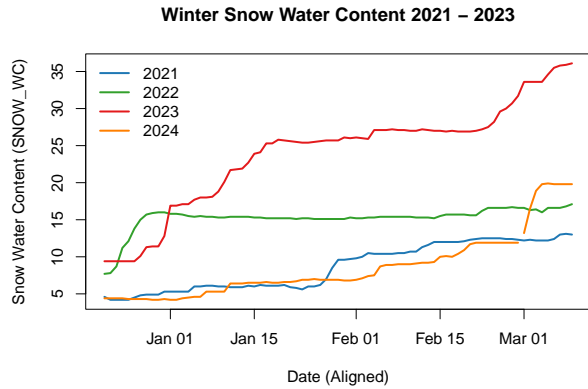
	diff	lwr	upr	p adj
2022-2021	-0.1962025	-2.7891727	2.396768	0.9973508
2023-2021	-4.2594937	-6.8524639	-1.666524	0.0001701
2024-2021	1.6469937	-0.9378608	4.231848	0.3545453
2023-2022	-4.0632911	-6.6562613	-1.470321	0.0003786
2024-2022	1.8431962	-0.7416583	4.428051	0.2557770
2024-2023	5.9064873	3.3216329	8.491342	0.0000001

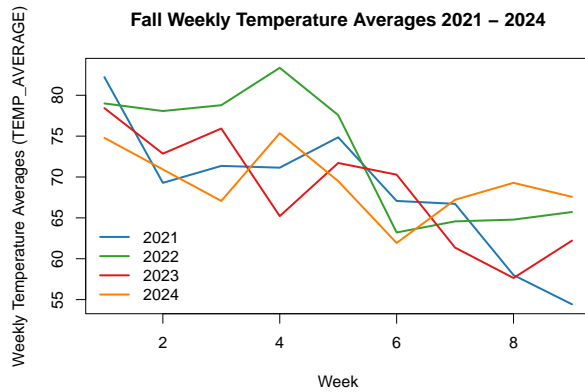
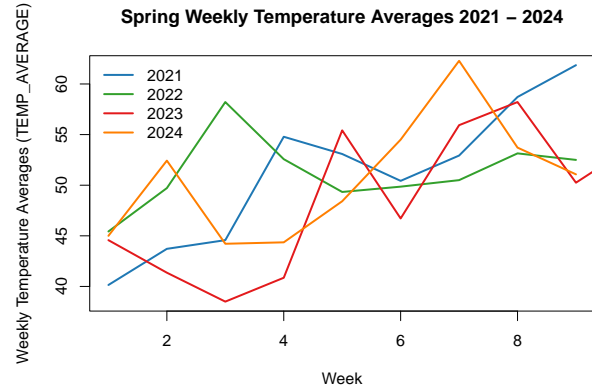
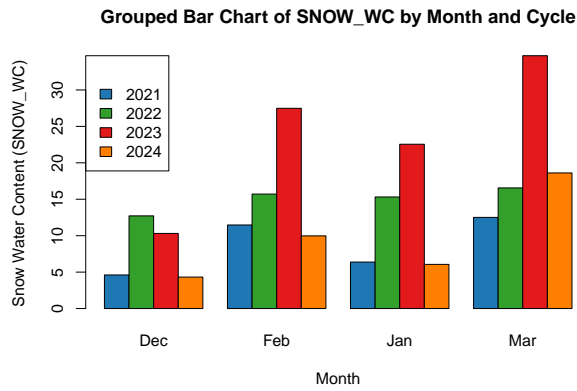
Table 4: TukeyHSD Spring (TEMP_AVERAGE ~ factor(YEAR))

	diff	lwr	upr	p adj
2022-2021	0.1774194	-3.4241871	3.7790258	0.9992590

	diff	lwr	upr	p adj
2023-2021	-3.1854839	-6.7870903	0.4161225	0.1036472
2024-2021	-0.3097567	-3.9260937	3.3065802	0.9961527
2023-2022	-3.3629032	-6.9645096	0.2387032	0.0768490
2024-2022	-0.4871761	-4.1035131	3.1291609	0.9854350
2024-2023	2.8757271	-0.7406098	6.4920641	0.1703164

Plots





Temperature Analysis

Seasonal

Stats

Table 5: tukey_result_ave_spring P= 0.0299, $p < 0.05$ significant
2023 is different

	diff	lwr	upr	p adj
2022-2021	0.1774194	-3.165458	3.5202971	0.9913670
2023-2021	-3.1854839	-6.528362	0.1573939	0.0654317
2023-2022	-3.3629032	-6.705781	-0.0200254	0.0482772

Table 6: tukey_result_max_spring p = 0.0105, significant 2023 is
different

	diff	lwr	upr	p adj
2022-2021	-0.6290323	-5.097828	3.8397632	0.9408623
2023-2021	-5.2903226	-9.759118	-0.8215271	0.0156669
2023-2022	-4.6612903	-9.130086	-0.1924949	0.0386952

Table 7: tukey_result_min_spring - $p=0.238$, NOT significant
All same/similar

	diff	lwr	upr	p adj
2022-2021	0.983871	-1.886921	3.8546628	0.6974276
2023-2021	-1.080645	-3.951437	1.7901467	0.6476309
2023-2022	-2.064516	-4.935308	0.8062757	0.2082135

Table 8: tukey_result_fall - $p < 0.05$, $p=0.00418$, significant, 2022 is different

	diff	lwr	upr	p adj
2022-2021	4.1774194	0.7554005	7.5994382	0.0121575
2023-2021	-0.0725806	-3.4945995	3.3494382	0.9986162
2023-2022	-4.2500000	-7.6720188	-0.8279812	0.0104769

Table 9: anova_fall_max - $p=0.00314$ significant 2022 is different

	diff	lwr	upr	p adj
2022-2021	3.790323	-0.4573783	8.038023	0.0908995
2023-2021	-2.354839	-6.6025396	1.892862	0.3914470
2023-2022	-6.145161	-10.3928622	-1.897460	0.0022303

Table 10: tukey_fall_min - $p=0.00311$ significant, 2022-2021 is different??

	diff	lwr	upr	p adj
2022-2021	4.564516	1.440149	7.6888836	0.0019882
2023-2021	2.209677	-0.914690	5.3340448	0.2190695
2023-2022	-2.354839	-5.479206	0.7695287	0.1788433

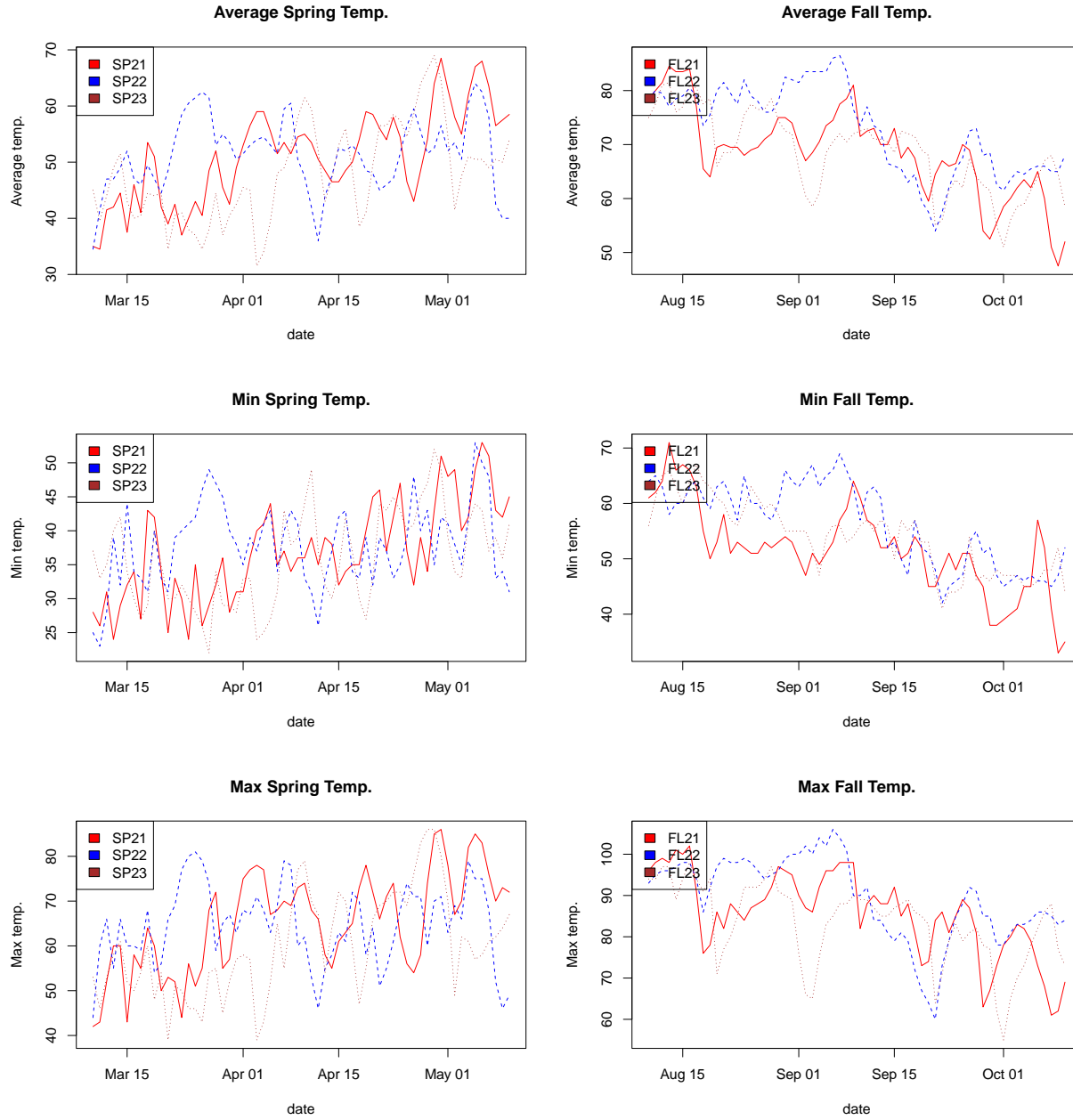
Table 11: spring_mean_table - 2023 Spring was cooler -4

Year	Mean_Temp
2021	51.10484
2022	51.28226
2023	47.91935

Table 12: fall_mean_table - 2022 Fall was warmer +4

Year	Mean_Temp
2021	68.74194
2022	72.91935
2023	68.66935

Plots



Week 1 Temperature Analysis

Stats

Table 13: Spring_week_Average - $P = 0.000484$, $p < 0.05$ significant, 2021 is different with 90% sig level

	diff	lwr	upr	p adj
2022-2021	-7.857143	-16.75181	1.037524	0.0888148
2023-2021	-13.214286	-22.10895	-4.319619	0.0036348
2023-2022	-5.357143	-14.25181	3.537524	0.2978214

Table 14: Spring_week_Max - $p = 0.00217$, significant, 2021 is different with 90% sig level

	diff	lwr	upr	p adj
2022-2021	-11.428571	-22.91443	0.057288	0.0512770
2023-2021	-18.714286	-30.20015	-7.228426	0.0016276
2023-2022	-7.285714	-18.77157	4.200145	0.2635155

Table 15: Spring_week_Min - $p = 0.0807$, NOT significant, 2023-2021 is different

	diff	lwr	upr	p adj
2022-2021	-4.285714	-12.47085	3.8994172	0.3941497
2023-2021	-7.714286	-15.89942	0.4708458	0.0666534
2023-2022	-3.428571	-11.61370	4.7565601	0.5446789

Table 16: Fall_week_Average - $p < 0.05$, $p = 0.000479$, significant, 2023 is different

	diff	lwr	upr	p adj
2022-2021	-5.428571	-11.56381	0.7066672	0.0881956
2023-2021	-11.785714	-17.92095	-5.6504757	0.0003220
2023-2022	-6.357143	-12.49238	-0.2219042	0.0415794

Table 17: Fall_week_Max - $p = 0.000185$ significant, 2023 is different

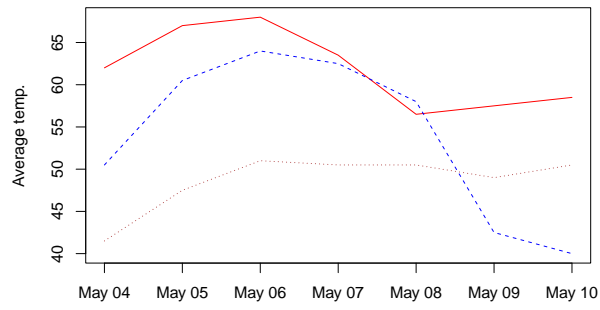
	diff	lwr	upr	p adj
2022-2021	-8.857143	-18.60243	0.888144	0.0785563
2023-2021	-20.428571	-30.17386	-10.683285	0.0001240
2023-2022	-11.571429	-21.31672	-1.826142	0.0187604

Table 18: Fall_week_Min - $p = 0.177$ NOT significant, All same

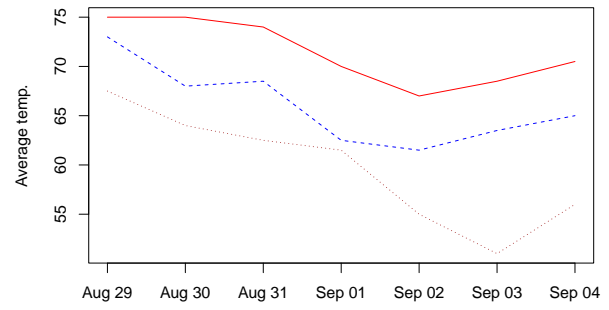
	diff	lwr	upr	p adj
2022-2021	-2.000000	-6.153465	2.153465	0.4520604
2023-2021	-3.142857	-7.296322	1.010608	0.1587432
2023-2022	-1.142857	-5.296322	3.010608	0.7652385

Plots

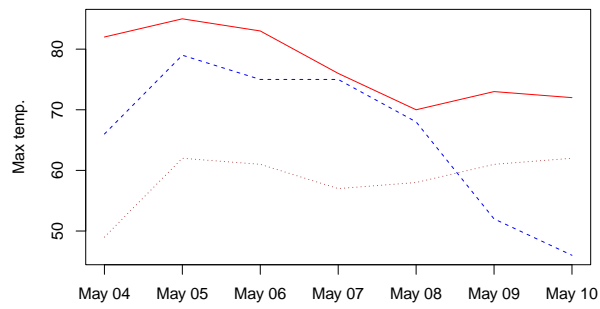
Spring week 1 Average



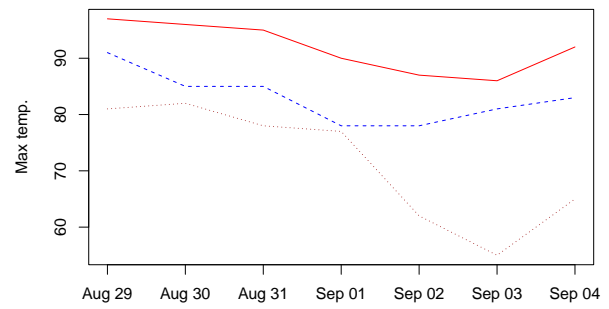
Fall week 1 Average



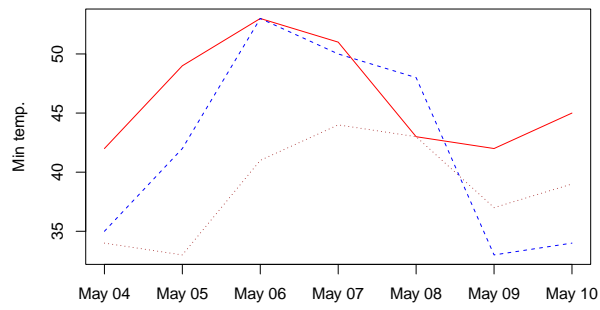
Spring week 1 Max



Fall week 1 Max



Spring week 1 Min



Fall week 1 Min

