

Supplementary Materials

Air Quality and Traffic Trends in Cincinnati, Ohio during the COVID-19 Pandemic

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Traffic Counts

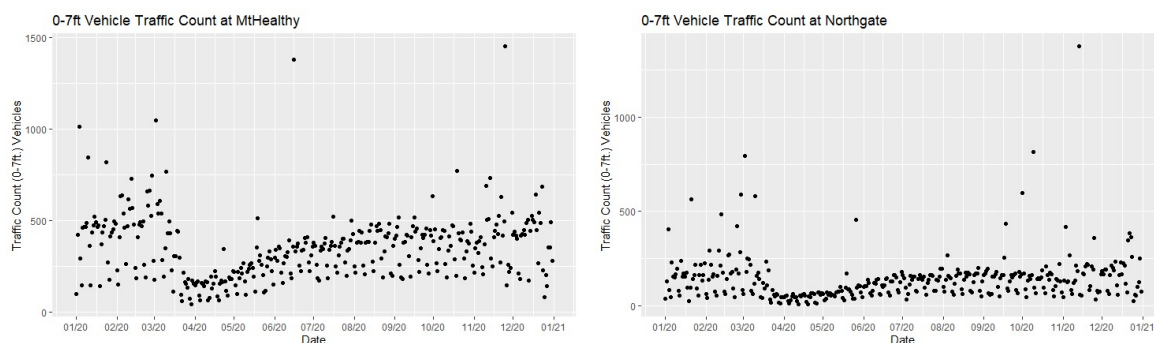


Figure S1. Traffic counts of vehicles 0-7 ft in length at the Mt. Healthy and Northgate sites.

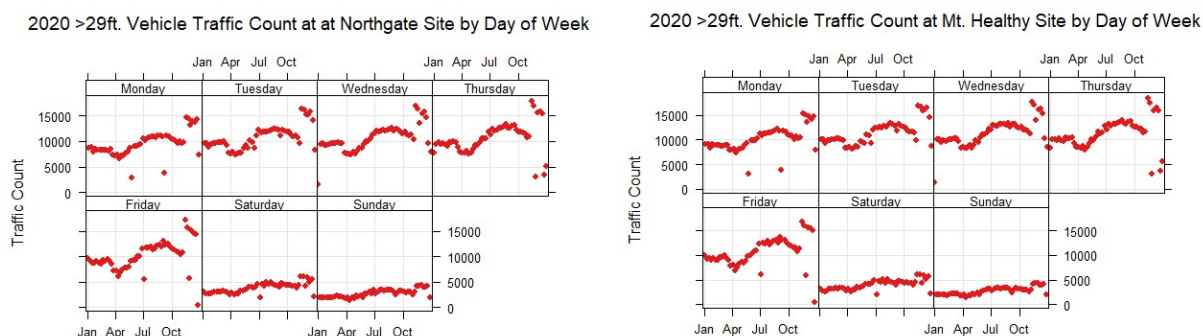
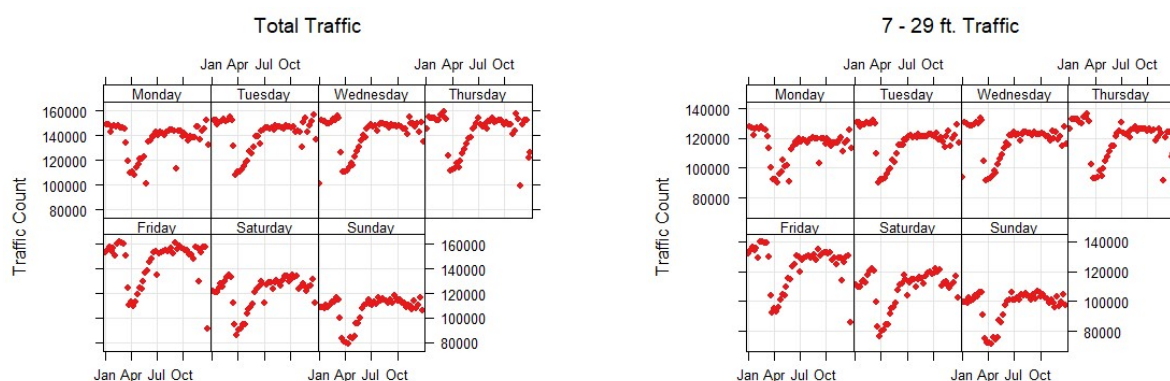


Figure S2. Traffic volume counts for vehicles >29 ft by day of the week during 2020.



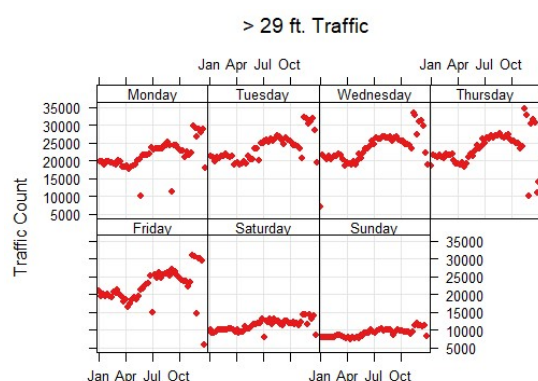


Figure S3. Predicted traffic counts for each classification at the Near Road site by day of the week over 2020.

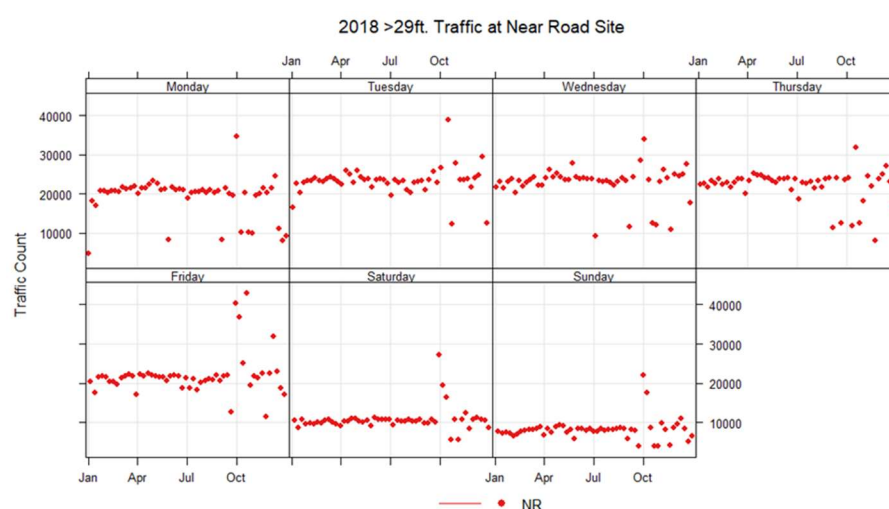


Figure S4. Traffic volume counts for vehicles >29 ft by day of the week during 2018.

Traffic Count Linear Regression Results

Table S1. Results of round 2 linear regression for prediction of total traffic counts at Near Road site in 2020. Northgate was used as the sole predictor because, when both Northgate and Mt. Healthy were used as predictors, the Northgate site coefficient was not statistically significant (p -value = 0.3365) while the Mt. Healthy site was somewhat significant (p -value = 0.0553).

Variable	Coefficient	Std. Error	t value	Pr(> t)
Intercept	5.02×10^4	2.12×10^3	25.35	$<2 \times 10^{-16}$
Mt. Healthy	1.11	2.47×10^{-2}	44.69	$<2 \times 10^{-16}$
R^2	0.761			

Table S2. Results of round 2 linear regression for prediction of 0–7 ft traffic counts at Near Road site in 2020. The model was built using both Mt. Healthy and Northgate sites as predictors only showed Mt. Healthy site coefficient to be somewhat significant (p -value = 0.0656), while the Northgate site coefficient was not statistically significant (p -value = 0.7022).

Variable	Coefficient	Std. Error	t value	Pr(> t)
Intercept	508.88	41.24	12.34	$<2 \times 10^{-16}$
Mt. Healthy	0.09	0.04	2.17	0.03
R^2	0.01			

Table S3. Results of round 2 linear regression for prediction of 7–29 ft traffic counts at Near Road site in 2020. The model was built using both Mt. Healthy and Northgate sites as predictors only showed the Northgate site coefficient to be somewhat significant (p -value = 1.2×10^{-7}), while the Mt. Healthy site coefficient was not statistically significant (p -value = 0.0866).

Variable	Coefficient	Std. Error	t value	Pr(> t)
Intercept	4.97×10^4	2.14×10^3	23.18	$<2 \times 10^{-16}$
Northgate	1.13	3.06×10^{-2}	36.89	$<2 \times 10^{-16}$
R^2	0.69			

Table S4. Results of round 1 linear regression for prediction of total counts >29 ft at Near Road site in 2020.

Variable	Coefficient	Std. Error	t value	Pr(> t)
Intercept	4939.44	373.48	13.23	$<2 \times 10^{-16}$
Northgate	−1.21	0.60	−2.02	0.044
Mt. Healthy	2.78	0.58	4.80	$<2.01 \times 10^{-16}$
R^2	0.72			

Predicted Traffic Trends at the Near Road site

Table S5. Predicted daily traffic counts at the Near Road site for each classification type (total traffic count, 0–7 ft, 7–29 ft, and >29 ft). Percentages shown indicate percent changes in traffic counts for each classification compared to respective classification type from pre × 10–pandemic 2020 (January 1–March 22).

		2020 Daily Average Traffic Count					
	Jan 1–Mar 22	Mar 23–April 10	Mar 23–May 1	Mar 23–May 20	Mar 23–June 30	May 20–June 30	July 1–Dec 11
Total Traffic	139,481	105,741 (−24.19%)	106,824 (−23.41%)	109,610 (−21.42%)	119,061 (−14.64%)	132,833 (−4.77%)	139,607 (0.09%)
7–29 ft Traffic	121,331	89,292 (−26.41%)	90,556 (−25.36%)	93,175 (−23.21%)	101,506 (−16.34%)	113,586 (−6.38%)	118,600 (−2.25%)
>29 ft Traffic	17,029	16,605 (−2.49%)	16,218 (−4.76%)	16,273 (−4.44%)	17,407 (2.22%)	19,103 (12.18%)	21,619 (26.95%)

Air Quality Summary Statistics

Table S6. Mean and standard deviation of pollutant concentration measured at the Near Road and Taft sites during each time period of interest from 2016 through 2020. The first number in each cell represents the mean, while the number in parentheses represents the standard deviation.

Time Period	Year	Near Road				Taft				
		BC ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	CO (ppm)	NO _x (ppb)	BC ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	CO (ppm)	NO ₂ (ppb)	O ₃ (ppb)
Jan 1– Mar 22	2016	1.653 (1.515)	NA	0.325 (0.224)	58.695 (57.237)	NA	7.674 (4.493)	0.261 (0.102)	10.087 (6.08)	23.867 (10.517)
	2017	1.334 (1.289)	10.175 (6.203)	0.338 (0.197)	47.626 (45.444)	NA	6.972 (5.28)	0.16 (0.111)	7.516 (6.684)	25.119 (11.189)
	2018	1.07 (0.992)	9.186 (5.066)	0.315 (0.2)	44.853 (45.372)	NA	9.611 (5.943)	0.209 (0.116)	10.473 (6.256)	26.417 (10.453)
	2019	1.093 (1.074)	12.342 (7.232)	0.395 (0.231)	46.792 (46.929)	0.404 (0.287)	10.052 (5.77)	0.204 (0.085)	10.639 (6.966)	24.917 (11.4)
	2020	1.059 (0.988)	10.218 (7.597)	0.31 (0.201)	48.096 (47.157)	0.43 (0.318)	8.16 (4.585)	0.189 (0.11)	9.624 (6.025)	20.418 (11.674)
Mar 23– April 10	2016	1.173 (1.013)	NA	0.27 (0.155)	35.035 (33.488)	NA	5.838 (3.536)	0.2 (0.078)	6.601 (3.74)	32.897 (11.354)
	2017	1.327 (1.14)	9.409 (5.578)	0.315 (0.15)	39.956 (32.986)	NA	6.327 (3.878)	0.121 (0.116)	4.617 (3.965)	37.022 (10.118)
	2018	1.129 (1.059)	8.675 (4.337)	0.349 (0.161)	50.23 (41.842)	NA	7.543 (4.693)	0.152 (0.137)	10.02 (6.536)	32.237 (13.95)
	2019	1.682 (1.145)	12.831 (7.593)	0.442 (0.224)	53.55 (41.793)	0.543 (0.409)	9.963 (6.036)	0.184 (0.093)	11.921 (8.097)	34.914 (12.543)
	2020	1.19 (1.091)	11.821 (9.82)	0.31 (0.186)	40.456 (40.528)	0.468 (0.444)	10.079 (6.05)	0.202 (0.077)	6.603 (5.35)	30.98 (11.521)
Mar 23– May 1	2016	1.889 (1.598)	NA	0.351 (0.2)	48.816 (41.758)	NA	7.506 (4.522)	0.237 (0.113)	7.854 (6.522)	34.346 (13.804)
	2017	1.473 (1.263)	10.461 (6.813)	0.336 (0.178)	41.639 (34.051)	NA	7.048 (4.01)	0.165 (0.104)	5.081 (5.309)	36.646 (11.136)
	2018	1.165 (1.104)	9.493 (5.368)	0.35 (0.178)	27.258 (39.254)	NA	7.867 (4.517)	0.172 (0.125)	9.459 (6.972)	36.093 (13.6)
	2019	1.409 (1.232)	11.47 (7.618)	0.375 (0.206)	37.74 (39.676)	0.456 (0.394)	8.917 (5.443)	0.169 (0.076)	9.472 (6.858)	35.959 (11.824)
	2020	0.996 (0.951)	10.189 (8.699)	0.283 (0.175)	34.33 (36.56)	0.339 (0.396)	8.931 (5.548)	0.196 (0.078)	6.72 (5.307)	32.779 (11.039)
Mar 23– May 20	2016	2.062 (1.574)	NA	0.353 (0.189)	51.876 (38.943)	NA	7.155 (4.782)	0.235 (0.1)	8.044 (6.177)	33.518 (13.162)
	2017	1.546 (1.222)	10.711 (6.433)	0.342 (0.166)	42.458 (33.682)	NA	7.457 (4.313)	0.178 (0.095)	4.993 (5.161)	37.062 (12.074)
	2018	1.267 (1.08)	12.306 (6.726)	0.346 (0.173)	30.626 (37.817)	NA	9.857 (5.738)	0.189 (0.114)	9.237 (6.597)	36.623 (13.856)
	2019	0.955 (1.209)	11.359 (7.404)	0.33 (0.214)	37.25 (39.365)	0.472 (0.402)	9.346 (5.494)	0.167 (0.08)	9.182 (6.762)	34.578 (13.032)
	2020	0.982 (0.895)	9.899 (8.471)	0.287 (0.17)	32.131 (34.844)	0.389 (0.412)	8.489 (5.312)	0.192 (0.079)	6.626 (5.365)	32.463 (11.267)
May 20–	2016	2.887 (1.89)	NA	0.364 (0.176)	52.053 (34.279)	NA	8.914 (5.467)	0.235 (0.105)	9.095 (6.857)	41.506 (17.403)

June 30	2017	1.48 (1.072)	10.354 (4.891)	0.328 (0.144)	42.176 (32.446)	NA	8.279 (4.667)	0.181 (0.081)	5.116 (6.845)	37.731 (15.886)
	2018	1.241 (1.104)	12.608 (5.702)	0.339 (0.185)	16.998 (26.706)	NA	10.75 (5.066)	0.179 (0.087)	8.22 (5.235)	36.877 (17.253)
	2019	0.937 (1.017)	11.02 (5.058)	0.306 (0.151)	32.686 (28.302)	0.489 (0.327)	9.825 (5.514)	0.14 (0.068)	8.166 (5.471)	32.741 (16.091)
	2020	1.135 (0.824)	10.399 (8.023)	0.296 (0.147)	19.214 (25.742)	0.577 (0.504)	9.426 (5.575)	0.174 (0.073)	6.306 (4.886)	34.65 (15.119)
Mar 23– June 30	2016	2.394 (1.76)	NA	0.382 (0.185)	51.664 (37.015)	NA	7.867 (5.162)	0.235 (0.102)	8.483 (6.515)	36.848 (15.639)
	2017	1.522 (1.166)	9.906 (5.855)	0.308 (0.158)	42.448 (33.295)	NA	7.773 (4.469)	0.179 (0.09)	5.076 (5.936)	37.471 (13.746)
	2018	1.254 (1.093)	12.985 (6.287)	0.332 (0.179)	24.795 (34.343)	NA	10.195 (5.489)	0.185 (0.104)	8.838 (6.109)	36.674 (15.346)
	2019	0.957 (1.135)	10.508 (6.488)	0.268 (0.192)	35.462 (35.387)	0.482 (0.373)	9.588 (5.513)	0.156 (0.076)	8.791 (6.295)	33.849 (14.455)
	2020	1.05 (0.872)	10.165 (8.306)	0.307 (0.162)	27.028 (32.062)	0.47 (0.463)	8.931 (5.44)	0.185 (0.077)	6.533 (5.192)	33.393 (13.111)
July 1– Dec 11	2016	2.97 (2.345)	NA	0.432 (0.251)	56.57 (46.504)	NA	8.967 (6.745)	0.184 (0.161)	9.521 (6.766)	26.176 (15.376)
	2017	1.872 (1.419)	12.728 (6.985)	0.38 (0.255)	56.973 (47.425)	NA	6.404 (7.138)	0.217 (0.155)	8.962 (7.142)	27.164 (15.756)
	2018	1.487 (1.209)	13.553 (7.522)	0.401 (0.217)	47.079 (38.139)	NA	10.905 (6.637)	0.159 (0.099)	9.071 (5.7)	24.05 (14.879)
	2019	1.488 (1.183)	12.112 (7.214)	0.378 (0.216)	42.823 (39.038)	0.58 (0.424)	10.536 (5.876)	0.183 (0.109)	9.853 (6.878)	28.718 (16.545)
	2020	1.655 (1.26)	11.615 (8.662)	0.424 (0.253)	50.461 (42.371)	0.665 (0.734)	9.322 (6.531)	0.223 (0.159)	8.931 (6.452)	25.519 (15.128)
Year Averages										
2016	2.15 (2.06)	NA	0.35 (0.23)	50.67 (47.79)	NA	7.7 (5.86)	0.23 (0.14)	8.53 (6.57)	32.74 (15.34)	
2017	1.51 (1.33)	10.53 (6.54)	0.34 (0.22)	44.75 (43.71)	NA	7.18 (6.19)	0.17 (0.13)	5.91 (6.9)	34.03 (14.95)	
2018	1.23 (1.17)	11.26 (6.86)	0.35 (0.25)	34.55 (42.41)	NA	9.53 (6.12)	0.18 (0.11)	9.33 (6.09)	32.71 (15.1)	
2019	1.22 (1.19)	11.66 (7.26)	0.36 (0.24)	40.9 (43.81)	0.49 (0.41)	9.75 (5.85)	0.17 (0.11)	9.72 (6.96)	32.24 (15.31)	
2020	1.15 (1.12)	10.62 (8.35)	0.32 (0.23)	35.96 (42.12)	0.48 (0.59)	9.05 (5.82)	0.19 (0.13)	7.33 (6.07)	30.03 (14.49)	

Table S7. Median pollutant concentration measured at the Near Road and Taft site during each time period of interest from 2016 through 2020.

Time Period	Year	Near Road				Taft				
		BC (µg/m ³)	PM _{2.5} (µg/m ³)	CO (ppm)	NO _x (ppb)	BC (µg/m ³)	PM _{2.5} (µg/m ³)	CO (ppm)	NO ₂ (ppb)	O ₃ (ppb)
Jan 1–Mar 22	2016	1.10	NA	0.27	39.00	NA	6.60	0.24	8.00	24.00
	2017	0.88	9.05	0.28	33.00	NA	6.00	0.16	6.00	26.00
	2018	0.73	8.20	0.26	31.00	NA	8.40	0.22	9.00	27.00
	2019	0.73	11.30	0.34	31.00	0.33	9.10	0.19	8.80	26.00
	2020	0.72	8.60	0.24	32.00	0.35	7.10	0.18	7.80	22.00

Mar 23–April 10	2016	0.85	NA	0.22	25.50	NA	5.25	0.21	6.00	35.00
	2017	0.98	8.05	0.27	31.00	NA	5.50	0.16	4.00	37.00
	2018	0.72	8.00	0.32	38.00	NA	7.20	0.19	8.00	36.00
	2019	1.55	11.60	0.37	45.00	0.46	8.80	0.16	9.90	36.50
	2020	0.87	8.80	0.27	28.50	0.34	9.30	0.19	4.80	31.00
Mar 23–May 1	2016	1.42	NA	0.30	38.00	NA	6.80	0.22	6.00	35.00
	2017	1.12	8.50	0.29	32.00	NA	6.20	0.18	4.00	37.00
	2018	0.76	8.10	0.31	8.00	NA	7.20	0.19	7.00	38.00
	2019	1.12	10.05	0.31	28.00	0.36	7.80	0.15	7.20	37.00
	2020	0.67	7.40	0.22	21.50	0.25	8.10	0.18	5.10	33.00
Mar 23–May 20	2016	1.66	NA	0.32	44.00	NA	6.40	0.22	6.00	33.00
	2017	1.24	9.30	0.31	35.00	NA	6.80	0.19	4.00	37.00
	2018	0.91	10.50	0.31	14.00	NA	8.80	0.20	7.00	38.00
	2019	0.54	9.80	0.28	26.50	0.37	8.20	0.15	6.90	35.00
	2020	0.70	7.30	0.24	20.00	0.28	7.60	0.18	4.80	33.00
May 20–June 30	2016	2.52	NA	0.33	48.00	NA	8.90	0.23	7.00	41.00
	2017	1.25	9.10	0.30	38.00	NA	7.30	0.17	3.00	37.00
	2018	0.98	11.40	0.31	0.00	NA	9.90	0.16	7.00	36.00
	2019	0.68	9.80	0.26	23.50	0.42	8.55	0.13	6.80	33.50
	2020	0.87	8.40	0.26	8.50	0.47	7.90	0.17	4.70	34.00
Mar 23–June 30	2016	2.02	NA	0.36	45.50	NA	7.00	0.22	6.00	36.00
	2017	1.24	9.00	0.29	36.00	NA	7.00	0.18	3.00	37.00
	2018	0.93	12.10	0.29	8.00	NA	9.20	0.19	7.00	37.00
	2019	0.61	9.55	0.23	25.00	0.40	8.40	0.14	6.90	34.00
	2020	0.78	8.40	0.28	15.50	0.36	7.80	0.17	4.80	33.00
June 30–Dec 11	2016	2.41	NA	0.38	45.00	NA	7.60	0.17	8.00	24.00
	2017	1.56	11.80	0.35	46.00	NA	5.00	0.20	7.00	25.00
	2018	1.18	12.60	0.36	40.00	0.43	10.00	0.14	8.00	22.00
	2019	1.17	11.30	0.32	32.00	0.46	9.70	0.16	7.80	26.00
	2020	1.32	10.20	0.36	40.00	0.51	8.70	0.23	7.00	24.00

Table S8. Range of pollutant concentration measured at the Near Road and Taft site during each time period of interest from 2016 through 2020.

Time Period	Year	Near Road				Taft				
		BC ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	CO (ppm)	NO _x (ppb)	BC ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	CO (ppm)	NO ₂ (ppb)	O ₃ (ppb)
Jan 1–Mar 22	2016	0–13.05	NA	0–1.77	0–529	NA	0–36	0–1.12	1–36	0–55
	2017	0–8.59	1–39.5	0–1.37	0–299	NA	0–33.6	0–0.8	0–41	0–56
	2018	0–7.3	1–50.4	0–1.5	0–267	NA	0–56.2	0–1.05	2–46	0–53
	2019	0–7.57	0.5–42.9	0–1.7	0–304	0–3.12	0–35.3	0–1.12	2–48.2	0–55
	2020	0–6.69	0–58.5	0–1.26	0–262	0–4.29	0–31.8	0–1.33	1.8–40.1	0–51
Mar 23–April 10	2016	0.117–6.86	NA	0–1.05	0–216	NA	0–19.5	0–0.49	2–26	0–54
	2017	0–6.98	1.4–32.6	0–1.03	0–198	NA	0–20.8	0–0.64	0–23	4–66
	2018	0–5.75	2.2–26.6	0–1.27	0–246	NA	0–23.8	0–0.6	3–41	0–54
	2019	0–6.94	0.7–38.4	0–1.21	0–236	0–3.75	0–35.8	0–0.68	2–46.4	0–62
	2020	0.037–7.27	0–51.1	0.09–0.99	0–238	0.025–3.4	1.1–33.8	0.076–0.75	1.2–32.6	1–64
Mar 23–May 1	2016	0–11.84	NA	0–1.23	0–266	NA	0–39.6	0–1.52	1–49	0–74
	2017	0–16.88	1–39.5	0–1.29	0–198	NA	0–20.8	0–0.67	0–35	4–77
	2018	0–7.78	2–37.4	0–1.27	0–246	NA	0–25.1	0–0.78	2–43	0–65
	2019	0–9.66	0.3–55.8	0–1.45	0–236	0–6.32	0–35.8	0–0.68	1.5–46.4	0–62
	2020	0–7.27	0–51.1	0–0.99	0–238	0–3.4	0–54.3	0–0.79	1.2–32.7	0–64

Mar 23– May 20	2016	0–11.84	NA	0–1.23	0–266	NA	0–39.6	0–1.52	1–49	0–74
	2017	0–16.88	1–39.5	0–1.29	0–198	NA	0–22.6	0–0.67	0–35	1–77
	2018	0–7.78	2–49.5	0–1.27	0–246	NA	0–30.6	0–0.78	2–47	0–68
	2019	0–9.66	0.3–55.8	0–1.45	0–236	0–6.32	0–37.6	0–0.78	1.5–46.4	0–70
	2020	0–7.27	0–51.1	0–1.04	0–238	0–3.4	0–54.3	0–0.79	1.2–34.3	0–64
May 20– June 30	2016	0–12.41	NA	0–1.23	0–198	NA	0–32.9	0–0.82	1–41	0–88
	2017	0–7.19	1–39.5	0–1.29	0–204	NA	0–39.4	0–0.86	0–54	0–86
	2018	0–11.58	2–66.9	0–1.27	0–176	NA	0–42.6	0–0.82	2–38	0–86
	2019	0–7.37	0–55.8	0–1.45	0–167	0–2.66	0–32.2	0–0.54	1.9–37.4	0–75
	2020	0–7.41	0–50.6	0–1.04	0–229	0–10.29	0–38.3	0–0.74	1–35.5	0–74
Mar 23– June 30	2016	0–12.41	NA	0–1.04	0–266	NA	0–39.6	0–1.52	1–49	0–88
	2017	0–16.88	1.5–27.9	0–1.03	0–204	NA	0–39.4	0–0.86	0–54	0–86
	2018	0–11.58	2.7–66.9	0–1.07	0–246	NA	0–42.6	0–0.82	2–47	0–86
	2019	0–9.66	0–29	0–0.98	0–236	0–6.32	0–37.6	0–0.78	1.5–46.4	0–75
	2020	0–7.41	0–50.6	0–0.86	0–238	0–10.29	0–54.3	0–0.79	1–35.5	0–74
June 30– Dec 11	2016	0–16.53	NA	0–1.58	0–332	NA	0–95.3	0–1.49	1–47	0–83
	2017	0–14.67	0.7–70.9	0–1.46	0–329	NA	0–56.3	0–2.11	0–39	0–87
	2018	0–13.39	0.4–61.2	0–2.81	0–274	NA	0–53.6	0–0.94	1–37	0–90
	2019	0–9.84	0–102.7	0–1.78	0–323	0–3.26	0–89.4	0–1.08	1.4–41.5	0–85
	2020	0–8.11	0–150.9	0–2.11	0–289	0–6.62	0–115.4	0–1.99	1–39.9	0–83

Table S9. Mean BC to PM_{2.5} ratio measured at the Near Road and Taft site during each time period of interest from 2016 through 2020.

BC:PM _{2.5} Ratio			
Time Period	Year	Near Road	Taft
Jan 1–Mar 22	2016	NA (NA)	NA (NA)
	2017	0.155 (0.156)	NA (NA)
	2018	0.119 (0.088)	NA (NA)
	2019	0.092 (0.076)	0.05 (0.062)
	2020	0.1 (0.52)	0.06 (0.04)
Mar 23–April 10	2016	NA (NA)	NA (NA)
	2017	0.218 (0.271)	NA (NA)
	2018	0.124 (0.089)	NA (NA)
	2019	0.121 (0.477)	0.055 (0.028)
	2020	0.149 (0.517)	0.047 (0.023)
Mar 23–May 1	2016	NA (NA)	NA (NA)
	2017	0.222 (0.261)	NA (NA)
	2018	0.112 (0.081)	NA (NA)
	2019	0.124 (0.337)	0.052 (0.026)
	2020	0.149 (0.497)	0.039 (0.031)
Mar 23–May 20	2016	NA (NA)	NA (NA)
	2017	0.206 (0.225)	NA (NA)
	2018	0.107 (0.078)	NA (NA)
	2019	0.094 (0.299)	0.052 (0.028)
	2020	0.149 (0.629)	0.048 (0.035)
May 20–June 30	2016	NA (NA)	NA (NA)
	2017	0.189 (0.186)	NA (NA)
	2018	0.103 (0.082)	NA (NA)
	2019	0.095 (0.231)	0.053 (0.029)

	2020	0.151 (0.726)	0.055 (0.039)
Mar 23–June 30	2016	NA (NA)	NA (NA)
	2017	0.162 (0.103)	NA (NA)
	2018	0.099 (0.084)	NA (NA)
	2019	0.094 (0.085)	0.055 (0.03)
	2020	0.157 (0.839)	0.065 (0.043)
June 30–Dec 11	2016	NA (NA)	NA (NA)
	2017	0.15 (0.085)	NA (NA)
	2018	0.11 (0.076)	0.058 (0.107)
	2019	0.13 (0.324)	0.058 (0.058)
	2020	0.17 (0.534)	0.067 (0.063)
Year Averages			
2016		NA (NA)	NA (NA)
2017		0.186 (0.184)	NA (NA)
2018		0.111 (0.083)	0.058 (0.107)
2019		0.107 (0.261)	0.053 (0.037)
2020		0.146 (0.609)	0.054 (0.039)

Air Quality *t*-Test Results

PM_{2.5} Near Road

Table S10. Results of interannual *t*-tests for PM_{2.5} concentrations over time periods of interest at the Near Road site for each year 2017 through 2020.

2020						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [PM _{2.5}] (µg/m ³)	Time Period 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	10.2184	11.8215	15.6884%	2.95 × 10 ^{−5}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	10.2184	10.1887	−0.2905%	9.19 × 10 ^{−1}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	10.2184	9.8986	−3.1291%	2.17 × 10 ^{−1}
May	Jan 1–Mar 23	May 20–June 30	10.2184	10.1648	−0.5245%	4.79 × 10 ^{−1}
June 30	Jan 1–Mar 22	Mar 23–June 30	10.2184	10.3993	1.7702%	8.12 × 10 ^{−1}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	10.2184	11.6150	13.6681%	7.06 × 10 ^{−12}
2019						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [PM _{2.5}] (µg/m ³)	Time Period 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	12.3417	12.8313	3.9664%	1.927 × 10 ^{−1}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	12.3417	11.4699	−7.0644%	2.238 × 10 ^{−3}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	12.3417	11.3590	−7.9628%	1.726 × 10 ^{−4}

May	Jan 1–Mar 23	May 20–June 30	12.3417	11.0202	−10.7082%	1.800×10^{-13}
June 30	Jan 1–Mar 22	Mar 23–June 30	12.3417	10.5078	−14.8601%	3.479×10^{-9}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	12.3417	12.1122	−1.8599%	2.530×10^{-1}

2018						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [PM _{2.5}] (µg/m ³)	Time Period 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> - value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	9.1857	8.6754	−5.5556%	1.727×10^{-1}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	9.1857	9.4932	3.3475%	3.458×10^{-1}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	9.1857	12.3063	33.9718%	1.253×10^{-30}
May	Jan 1–Mar 23	May 20–June 30	9.1857	12.6076	37.2522%	3.257×10^{-52}
June 30	Jan 1–Mar 22	Mar 23–June 30	9.1857	12.9849	41.3596%	2.469×10^{-51}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	9.1857	13.5532	47.5463%	8.221×10^{-98}

2017						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [PM _{2.5}] (µg/m ³)	Time Period 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> - value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	10.1753	9.4088	−7.5329%	4.070×10^{-2}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	10.1753	10.4613	2.8104%	3.134×10^{-1}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	10.1753	10.7110	5.2651%	3.302×10^{-2}
May	Jan 1–Mar 23	May 20–June 30	10.1753	10.3544	1.7599%	2.786×10^{-1}
June 30	Jan 1–Mar 22	Mar 23–June 30	10.1753	9.9059	−2.6479%	4.146×10^{-1}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	10.1753	12.7282	25.0891%	1.815×10^{-37}

Table S11. Results of interannual *t*-tests for PM_{2.5} concentrations over time periods of interest at the Near Road site for each year 2017 through 2020.

Pre COVID: Jan 1–Mar 22					
Year 1	Year 2	Year 1 Avg. [PM _{2.5}] (µg/m ³)	Year 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> - value
2019	2020	12.3417	10.2184	−17.2047%	1.288×10^{-19}
2018	2020	9.1857	10.2184	11.2422%	1.009×10^{-5}
2017	2020	10.1753	10.2184	0.4233%	8.538×10^{-1}

Beginning of Lockdown: March 23–April 10					
Year 1	Year 2	Year 1 Avg. [PM _{2.5}] (µg/m ³)	Year 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	12.8313	11.8215	−7.8697%	3.669×10^{-2}
2018	2020	8.6754	11.8215	36.2646%	6.957×10^{-11}
2017	2020	9.4088	11.8215	25.6426%	5.760×10^{-7}
Lockdown: March 23–May 1					
Year 1	Year 2	Year 1 Avg. [PM _{2.5}] (µg/m ³)	Year 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	11.4699	10.1887	−11.1700%	1.911×10^{-1}
2018	2020	9.4932	10.1887	7.3262%	1.239×10^{-19}
2017	2020	10.4613	10.1887	−2.6056%	4.827×10^{-13}
Full Opening: March 23–May 20					
Year 1	Year 2	Year 1 Avg. [PM _{2.5}] (µg/m ³)	Year 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	11.3590	9.8986	−12.8564%	2.730×10^{-7}
2018	2020	12.3063	9.8986	−19.5642%	2.132×10^{-16}
2017	2020	10.7110	9.8986	−7.5848%	3.122×10^{-3}
May: May 20–June 30					
Year 1	Year 2	Year 1 Avg. [PM _{2.5}] (µg/m ³)	Year 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	11.020	10.165	−7.7620%	7.077×10^{-1}
2018	2020	12.608	10.165	−19.3756%	4.718×10^{-19}
2017	2020	10.354	10.165	−1.8312%	8.833×10^{-2}
Through June: March 23–June 30					
Year 1	Year 2	Year 1 Avg. [PM _{2.5}] (µg/m ³)	Year 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	10.5078	10.3993	−1.0325%	6.891×10^{-5}
2018	2020	12.9849	10.3993	−19.9125%	5.469×10^{-29}
2017	2020	9.9059	10.3993	4.9807%	3.689×10^{-1}

Year 1	Year 2	Year 1 Avg. [PM _{2.5}] (µg/m ³)	Year 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	12.1122	11.6150	−4.1046%	2.456×10^{-3}
2018	2020	13.5532	11.6150	−14.3002%	3.651×10^{-29}
2017	2020	12.7282	11.6150	−8.7456%	8.551×10^{-12}

*PM_{2.5} Taft***Table S12.** Results of interannual *t*-tests for PM_{2.5} concentrations over time periods of interest at the Taft site for each year 2016 through 2020.

2020						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [PM _{2.5}] (µg/m ³)	Time Period 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	8.1603	10.0787	23.5095%	1.05×10^{-10}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	8.1603	8.9306	9.4401%	6.22×10^{-4}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	8.1603	8.4892	4.0306%	9.90×10^{-2}
May	Jan 1–Mar 23	May 20–June 30	8.1603	9.4265	15.5166%	5.51×10^{-10}
June 30	Jan 1–Mar 22	Mar 23–June 30	8.1603	8.9314	9.4493%	9.52×10^{-6}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	8.1603	9.3218	14.2341%	2.13×10^{-13}
2019						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [PM _{2.5}] (µg/m ³)	Time Period 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	10.0524	9.9632	−0.8882%	7.637×10^{-1}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	10.0524	8.9174	−11.2913%	4.647×10^{-7}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	10.0524	9.3461	−7.0265%	3.980×10^{-4}
May	Jan 1–Mar 23	May 20–June 30	10.0524	9.8254	−2.2587%	2.658×10^{-1}
June 30	Jan 1–Mar 22	Mar 23–June 30	10.0524	9.5883	−4.6178%	7.708×10^{-3}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	10.0524	10.5360	4.8104%	2.251×10^{-3}
2018						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [PM _{2.5}] (µg/m ³)	Time Period 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	9.6112	7.5428	−21.5212%	3.293×10^{-12}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	9.6112	7.8669	−18.1490%	9.426×10^{-15}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	9.6112	9.8571	2.5579%	2.175×10^{-1}
May	Jan 1–Mar 23	May 20–June 30	9.6112	10.7505	11.8537%	2.367×10^{-8}
June 30	Jan 1–Mar 22	Mar 23–June 30	9.6112	10.1945	6.0692%	4.147×10^{-1}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	9.6112	10.9050	13.4613%	2.950×10^{-16}

2017						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [PM _{2.5}] (µg/m ³)	Time Period 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	6.9720	6.3272	−9.2481%	2.990×10^{-2}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	6.9720	7.0481	1.0924%	7.351×10^{-1}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	6.9720	7.4574	6.9629%	1.490×10^{-2}
May	Jan 1–Mar 23	May 20–June 30	6.9720	8.2787	18.7423%	1.532×10^{-10}
June 30	Jan 1–Mar 22	Mar 23–June 30	6.9720	7.7726	11.4840%	4.273×10^{-6}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	6.9720	6.4042	−8.1440%	3.321×10^{-4}

2016						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [PM _{2.5}] (µg/m ³)	Time Period 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	7.6736	5.8377	−23.9247%	6.335×10^{-10}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	7.6736	7.5057	−2.1878%	1.774×10^{-2}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	7.6736	7.1550	−6.7580%	3.589×10^{-1}
May	Jan 1–Mar 23	May 20–June 30	7.6736	8.9136	16.1594%	1.265×10^{-9}
June 30	Jan 1–Mar 22	Mar 23–June 30	7.6736	7.8673	2.5235%	2.776×10^{-7}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	7.6736	8.9670	16.8552%	2.063×10^{-36}

Table S13. Results of interannual *t*-tests for PM_{2.5} concentrations over time periods of interest at the Taft site for each year 2016 through 2020.

Pre COVID: Jan 1–Mar 22					
Year 1	Year 2	Year 1 Avg. [PM _{2.5}] (µg/m ³)	Year 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	10.0524	8.1603	−18.8229%	5.239×10^{-25}
2018	2020	9.6112	8.1603	−15.0962%	2.289×10^{-15}
2017	2020	6.9720	8.1603	17.0443%	8.531×10^{-11}
2016	2020	7.6736	8.1603	6.3422%	7.843×10^{-3}

Beginning of Lockdown: March 23–April 10					
Year 1	Year 2	Year 1 Avg. [PM _{2.5}] (µg/m ³)	Year 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	9.9632	10.0787	1.1600%	7.598×10^{-1}
2018	2020	7.5428	10.0787	33.6212%	1.962×10^{-11}
2017	2020	6.3272	10.0787	59.2923%	3.335×10^{-23}
2016	2020	5.8377	10.0787	72.6484%	3.429×10^{-29}

Lockdown: March 23–May 1					
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Year 1	Year 2	Year 1 Avg. [PM _{2.5}] (µg/m ³)	Year 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	8.9174	8.9306	0.1484%	9.595×10^{-1}
2018	2020	7.8669	8.9306	13.5219%	4.433×10^{-5}
2017	2020	7.0481	8.9306	26.7092%	4.988×10^{-13}
2016	2020	7.5057	8.9306	18.9841%	4.507×10^{-8}

Full Opening: March 23–May 20					
Year 1	Year 2	Year 1 Avg. [PM _{2.5}] (µg/m ³)	Year 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	9.3461	8.4892	−9.1687%	6.462×10^{-5}
2018	2020	9.8571	8.4892	−13.8770%	1.808×10^{-10}
2017	2020	7.4574	8.4892	13.8356%	1.506×10^{-6}
2016	2020	7.1550	8.4892	18.6466%	5.121×10^{-10}

May: May 20–June 30					
Year 1	Year 2	Year 1 Avg. [PM _{2.5}] (µg/m ³)	Year 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	9.8254	9.4265	−4.0600%	8.836×10^{-2}
2018	2020	10.7505	9.4265	−12.3158%	1.574×10^{-8}
2017	2020	8.2787	9.4265	13.8648%	9.505×10^{-7}
2016	2020	8.9136	9.4265	5.7538%	2.854×10^{-2}

Through June: March 23–June 30					
Year 1	Year 2	Year 1 Avg. [PM _{2.5}] (µg/m ³)	Year 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	9.5883	8.9314	−6.8508%	6.687×10^{-5}
2018	2020	10.1945	8.9314	−12.3906%	1.777×10^{-14}
2017	2020	7.7726	8.9314	14.9081%	2.030×10^{-12}
2016	2020	7.8673	8.9314	13.5260%	1.087×10^{-10}

Second Half of Year: July 1–Dec 11					
Year 1	Year 2	Year 1 Avg. [PM _{2.5}] (µg/m ³)	Year 2 Avg. [PM _{2.5}] (µg/m ³)	% Change Between Years	Two-sided <i>t</i> - test <i>p</i> -value
2019	2020	10.5360	9.3218	−11.5241%	3.954×10^{-21}
2018	2020	10.9050	9.3218	−14.5179%	9.447×10^{-35}
2017	2020	6.4042	9.3218	45.5588%	2.394×10^{-113}
2016	2020	8.9670	9.3218	3.9569%	5.819×10^{-3}

Near Road: BC

Table S14. Results of interannual *t*-tests for BC concentrations over time periods of interest at the Near Road site for each year 2016 through 2020.

2020						
	Time Period 1	Time Period 2	Time Period 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Time Period 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Time Periods	Two-sided <i>t</i> - test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	1.0594	1.1899	12.3128%	6.17×10^{-2}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	1.0594	0.9961	−5.9750%	2.32×10^{-1}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	1.0594	0.9817	−7.3398%	9.71×10^{-2}
May	Jan 1–Mar 23	May 20–June 30	1.0594	1.1355	7.1789%	2.46×10^{-28}
June 30	Jan 1–Mar 22	Mar 23–June 30	1.0594	1.0499	−0.8963%	8.17×10^{-1}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	1.0594	1.6554	56.2572%	1.12×10^{-57}

2019						
	Time Period 1	Time Period 2	Time Period 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Time Period 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Time Periods	Two-sided <i>t</i> - test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	1.0933	1.6824	53.8880%	3.24×10^{-17}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	1.0933	1.4088	28.8611%	2.50×10^{-9}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	1.0933	0.9551	−12.6365%	3.20×10^{-3}
May	Jan 1–Mar 22	May 20–June 30	1.0933	0.9369	−14.3053%	8.35×10^{-4}
June 30	Jan 1–Mar 22	Mar 23–June 30	1.0933	0.9570	−12.4638%	8.73×10^{-4}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	1.0933	1.4881	36.1120%	2.65×10^{-26}

2018						
	Time Period 1	Time Period 2	Time Period 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Time Period 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Time Periods	Two-sided <i>t</i> - test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	1.0704	1.1293	5.5012%	3.99×10^{-1}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	1.0704	1.1654	8.8780%	7.25×10^{-2}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	1.0704	1.2666	18.3286%	2.84×10^{-5}
May	Jan 1–Mar 23	May 20–June 30	1.0704	1.2413	15.9709%	2.60×10^{-4}
June 30	Jan 1–Mar 22	Mar 23–June 30	1.0704	1.2540	17.1533%	8.62×10^{-5}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	1.0704	1.4867	38.8926%	4.66×10^{-29}

2017						
	Time Period 1	Time Period 2	Time Period 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Time Period 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Time Periods	Two-sided <i>t</i> - test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	1.3335	1.3274	−0.4617%	9.30×10^{-1}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	1.3335	1.4730	10.4553%	8.42×10^{-3}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	1.3335	1.5460	15.9294%	5.84×10^{-6}
May	Jan 1–Mar 23	May 20–June 30	1.3335	1.4804	11.0115%	1.71×10^{-3}
June 30	Jan 1–Mar 22	Mar 23–June 30	1.3335	1.5223	14.1545%	4.01×10^{-6}

Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	1.3335	1.8721	40.3826%	1.94×10^{-47}
2016						
	Time Period 1	Time Period 2	Time Period 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Time Period 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Time Periods	Two-sided <i>t</i>-test <i>p</i>-value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	1.6532	1.1726	−29.0726%	5.81×10^{-12}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	1.6532	1.8894	14.2879%	8.69×10^{-26}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	1.6532	2.0616	24.7036%	2.63×10^{-54}
May	Jan 1–Mar 23	May 20–June 30	1.6532	2.8869	74.6262%	1.10×10^{-149}
June 30	Jan 1–Mar 22	Mar 23–June 30	1.6532	2.3943	44.8254%	3.51×10^{-147}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	1.6532	2.9693	79.6049%	0.00

Table S15. Results of interannual *t*-tests for BC concentrations over time periods of interest at the Near Road site for each year 2016 through 2020.

Pre COVID: Jan 1–Mar 22					
Time Periods Compared		Near Road			
Time Period 1	Time Period 2	Time Period 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Time Period 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Years	Two-sided <i>t</i>-test <i>p</i>-value
2019	2020	1.0933	1.0594	−3.0952%	4.316×10^{-1}
2018	2020	1.0704	1.0594	−1.0244%	7.989×10^{-1}
2017	2020	1.3335	1.0594	−20.5563%	1.894×10^{-10}
2016	2020	1.6532	1.0594	−35.9178%	2.993×10^{-43}
Beginning of Lockdown: March 23–April 10					
Time Period 1	Time Period 2	Time Period 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Time Period 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Years	Two-sided <i>t</i>-test <i>p</i>-value
2019	2020	1.6824	1.1899	−29.2756%	2.972×10^{-8}
2018	2020	1.1293	1.1899	5.3658%	4.952×10^{-1}
2017	2020	1.3274	1.1899	−10.3607%	1.216×10^{-1}
2016	2020	1.1726	1.1899	1.4734%	8.458×10^{-1}
Lockdown: March 23–May 1					
Time Period 1	Time Period 2	Time Period 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Time Period 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Years	Two-sided <i>t</i>-test <i>p</i>-value
2019	2020	1.4088	0.9961	−29.2923%	1.604×10^{-11}
2018	2020	1.1654	0.9961	−14.5265%	5.696×10^{-3}
2017	2020	1.4730	0.9961	−32.3737%	6.930×10^{-15}
2016	2020	1.8894	0.9961	−47.2795%	4.027×10^{-48}
Full Opening: March 23–May 20					
Time Period 1	Time Period 2	Time Period 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Time Period 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Years	Two-sided <i>t</i>-test <i>p</i>-value

2019	2020	0.9551	0.9817	2.7800%	5.984×10^{-1}
2018	2020	1.2666	0.9817	−22.4946%	1.601×10^{-8}
2017	2020	1.5460	0.9817	−36.5021%	4.735×10^{-29}
2016	2020	2.0616	0.9817	−52.3842%	2.193×10^{-101}

May: May 20–June 30

Time Period 1	Time Period 2	Time Period 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Time Period 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	0.9369	1.1355	−17.4914%	2.183×10^{-4}
2018	2020	1.2413	1.1355	9.3230%	4.875×10^{-2}
2017	2020	1.4804	1.1355	30.3765%	1.389×10^{-10}
2016	2020	2.8869	1.1355	154.2513%	0.000

Through June: March 23–June 30

Time Period 1	Time Period 2	Time Period 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Time Period 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	0.9570	1.0499	9.7103%	1.641×10^{-2}
2018	2020	1.2540	1.0499	−16.2734%	1.372×10^{-7}
2017	2020	1.5223	1.0499	−31.0306%	3.514×10^{-34}
2016	2020	2.3943	1.0499	−56.1487%	2.955×10^{-261}

Second Half of Year: July 1–Dec 11

Time Period 1	Time Period 2	Time Period 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Time Period 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	1.4881	1.6554	11.2471%	3.133×10^{-8}
2018	2020	1.4867	1.6554	11.3497%	2.417×10^{-8}
2017	2020	1.8721	1.6554	−11.5727%	7.905×10^{-13}
2016	2020	2.9693	1.6554	−44.2482%	0.000

Taft: BC

Table S16. Results of interannual *t*-tests for BC concentrations over time periods of interest at the Taft site from 2019 through 2020.

2020						
	Time Period 1	Time Period 2	Time Period 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Time Period 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> - value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	0.430	0.468	8.831%	1.23×10^{-1}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	0.430	0.339	−21.061%	1.29×10^{-6}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	0.430	0.389	−9.470%	1.39×10^{-2}
May	Jan 1–Mar 23	May 20–June 30	0.430	0.577	34.176%	4.47×10^{-27}
June 30	Jan 1–Mar 22	Mar 23–June 30	0.430	0.470	9.303%	5.64×10^{-3}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	0.430	0.665	54.762%	1.69×10^{-71}

2019						
	Time Period 1	Time Period 2	Time Period 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Time Period 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> - value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	0.404	0.543	34.343%	1.76×10^{-8}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	0.404	0.456	12.713%	5.90×10^{-3}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	0.404	0.472	16.786%	4.05×10^{-5}
May	Jan 1–Mar 23	May 20–June 30	0.404	0.489	20.980%	4.19×10^{-10}
June 30	Jan 1–Mar 22	Mar 23–June 30	0.404	0.482	19.195%	7.69×10^{-8}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	0.404	0.580	43.551%	6.19×10^{-41}

Table S17. Results of interannual *t*-tests for BC concentrations over time periods of interest at the Taft site from 2019 through 2020.

Year 1	Year 2	Year 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Year 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Years	Two-sided <i>t</i> - test <i>p</i> -value
2019	2020	0.4042	0.4300	6.3756%	8.949×10^{-2}
Beginning of Lockdown: March 23–April 10					
Year 1	Year 2	Year 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Year 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Years	Two-sided <i>t</i> - test <i>p</i> -value
2019	2020	0.5430	0.4679	−13.8257%	1.660×10^{-2}
Lockdown: March 23–May 1					
Year 1	Year 2	Year 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Year 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Years	Two-sided <i>t</i> - test <i>p</i> -value
2019	2020	0.4556	0.3394	−25.4996%	7.867×10^{-8}
Full Opening: March 23–May 20					
Year 1	Year 2	Year 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Year 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Years	Two-sided <i>t</i> - test <i>p</i> -value
2019	2020	0.4721	0.3893	−17.5395%	3.311×10^{-6}
May: May 20–June 30					
Year 1	Year 2	Year 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Year 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Years	Two-sided <i>t</i> - test <i>p</i> -value
2019	2020	0.4890	0.5769	17.9792%	1.693×10^{-8}
Through June: March 23–June 30					
Year 1	Year 2	Year 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Year 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Years	Two-sided <i>t</i> - test <i>p</i> -value

2019	2020	0.4818	0.4700	-2.4526%	3.873×10^{-1}
Second Half of Year: July 1–Dec 11					
Year 1	Year 2	Year 1 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	Year 2 Avg. [BC] ($\mu\text{g}/\text{m}^3$)	% Change Between Years	Two-sided <i>t</i> - test <i>p</i> -value
2019	2020	0.5802	0.6654	14.6830%	1.461×10^{-15}

*CO Near Road***Table S18.** Results of interannual *t*-tests for CO concentrations over time periods of interest at the Near Road site for each year 2016 through 2020.

2020						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [CO] (ppm)	Time Period 2 Avg. [CO] (ppm)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> - value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	0.3096	0.3099	0.0825%	9.81×10^{-1}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	0.3096	0.2829	−8.6460%	1.11×10^{-3}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	0.3096	0.2869	−7.3392%	1.78×10^{-3}
May	Jan 1–Mar 23	May 20–June 30	0.3096	0.2958	−4.4748%	7.13×10^{-1}
June 30	Jan 1–Mar 22	Mar 23–June 30	0.3096	0.3069	−0.9017%	2.92×10^{-2}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	0.3096	0.4243	37.0188%	1.78×10^{-87}
2019						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [CO] (ppm)	Time Period 2 Avg. [CO] (ppm)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> - value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	0.3948	0.4425	12.0609%	1.10×10^{-5}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	0.3948	0.3751	−5.0034%	1.61×10^{-2}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	0.3948	0.3300	−16.4127%	5.26×10^{-19}
May	Jan 1–Mar 23	May 20–June 30	0.3948	0.3061	−22.4835%	1.14×10^{-61}
June 30	Jan 1–Mar 22	Mar 23–June 30	0.3948	0.2685	−32.0064%	2.63×10^{-44}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	0.3948	0.3776	−4.3539%	2.90×10^{-3}
2018						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [CO] (ppm)	Time Period 2 Avg. [CO] (ppm)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> - value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	0.3150	0.3492	10.8777%	1.56×10^{-3}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	0.3150	0.3500	11.1285%	1.97×10^{-5}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	0.3150	0.3457	9.7634%	2.36×10^{-5}
May	Jan 1–Mar 23	May 20–June 30	0.3150	0.3393	7.7354%	2.59×10^{-2}
June 30	Jan 1–Mar 22	Mar 23–June 30	0.3150	0.3319	5.3689%	2.48×10^{-18}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	0.3150	0.4009	27.2686%	5.34×10^{-50}

2017						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [CO] (ppm)	Time Period 2 Avg. [CO] (ppm)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	0.3381	0.3148	−6.8863%	3.16×10^{-2}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	0.3381	0.3363	−0.5324%	8.27×10^{-1}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	0.3381	0.3417	1.0826%	6.15×10^{-1}
May	Jan 1–Mar 23	May 20–June 30	0.3381	0.3278	−3.0425%	9.70×10^{-5}
June 30	Jan 1–Mar 22	Mar 23–June 30	0.3381	0.3085	−8.7544%	1.05×10^{-1}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	0.3381	0.3804	12.5231%	2.23×10^{-13}
2016						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [CO] (ppm)	Time Period 2 Avg. [CO] (ppm)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	0.3254	0.2703	−16.9401%	3.62×10^{-7}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	0.3254	0.3508	7.8126%	1.21×10^{-1}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	0.3254	0.3530	8.4719%	4.08×10^{-2}
May	Jan 1–Mar 23	May 20–June 30	0.3254	0.3639	11.8189%	1.34×10^{-13}
June 30	Jan 1–Mar 22	Mar 23–June 30	0.3254	0.3816	17.2836%	5.00×10^{-5}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	0.3254	0.4316	32.6309%	7.02×10^{-59}

Table S19. Results of interannual *t*-tests for CO concentrations over time periods of interest at the Near Road site for each year 2016 through 2020.

Pre COVID: Jan 1–Mar 22					
Year 1	Year 2	Year 1 Avg. [CO] (ppm)	Year 2 Avg. [CO] (ppm)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	0.3948	0.3096	−21.5758%	3.173×10^{-37}
2018	2020	0.3150	0.3096	−1.6924%	4.247×10^{-1}
2017	2020	0.3381	0.3096	−8.4115%	2.057×10^{-5}
2016	2020	0.3254	0.3096	−4.8390%	1.837×10^{-2}
Beginning of Lockdown: March 23–April 10					
Year 1	Year 2	Year 1 Avg. [CO] (ppm)	Year 2 Avg. [CO] (ppm)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	0.4425	0.3099	−29.9587%	7.221×10^{-22}
2018	2020	0.3492	0.3099	−11.2638%	4.329×10^{-3}
2017	2020	0.3148	0.3099	−1.5569%	7.222×10^{-1}
2016	2020	0.2703	0.3099	14.6636%	4.047×10^{-3}
Lockdown: March 23–May 1					
Year 1	Year 2	Year 1 Avg. [CO] (ppm)	Year 2 Avg. [CO] (ppm)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value

2019	2020	0.3751	0.2829	−24.5829%	3.023×10^{-22}
2018	2020	0.3500	0.2829	−19.1855%	1.596×10^{-12}
2017	2020	0.3363	0.2829	−15.8824%	1.908×10^{-8}
2016	2020	0.3508	0.2829	−19.3662%	8.782×10^{-13}

Full Opening: March 23–May 20					
Year 1	Year 2	Year 1 Avg. [CO] (ppm)	Year 2 Avg. [CO] (ppm)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	0.3300	0.2869	−13.0628%	3.598×10^{-8}
2018	2020	0.3457	0.2869	−17.0101%	5.701×10^{-14}
2017	2020	0.3417	0.2869	−16.0423%	2.456×10^{-12}
2016	2020	0.3530	0.2869	−18.7099%	3.228×10^{-17}

May: May 20–June 30					
Year 1	Year 2	Year 1 Avg. [CO] (ppm)	Year 2 Avg. [CO] (ppm)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	0.3061	0.2958	−3.3562%	1.055×10^{-5}
2018	2020	0.3393	0.2958	−12.8341%	4.063×10^{-3}
2017	2020	0.3278	0.2958	−9.7645%	8.513×10^{-1}
2016	2020	0.3639	0.2958	−18.7054%	1.008×10^{-17}

Through June: March 23–June 30					
Year 1	Year 2	Year 1 Avg. [CO] (ppm)	Year 2 Avg. [CO] (ppm)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	0.2685	0.3069	14.3005%	8.740×10^{-2}
2018	2020	0.3319	0.3069	−7.5428%	4.315×10^{-13}
2017	2020	0.3085	0.3069	−0.5293%	1.007×10^{-7}
2016	2020	0.3816	0.3069	−19.5941%	1.061×10^{-29}

Second Half of Year: July 1–Dec 11					
Year 1	Year 2	Year 1 Avg. [CO] (ppm)	Year 2 Avg. [CO] (ppm)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	0.3776	0.4243	12.3473%	3.076×10^{-23}
2018	2020	0.4009	0.4243	5.8390%	6.153×10^{-7}
2017	2020	0.3804	0.4243	11.5268%	9.725×10^{-21}
2016	2020	0.4316	0.4243	−1.6908%	1.200×10^{-1}

CO Taft

Table S20. Results of interannual *t*-tests for CO concentrations over time periods of interest at the Taft site for each year 2016 through 2020.

2020
Time Period 2

Time Period Description	Time Period 1		Time Period 1 Avg. [CO] (ppm)	Time Period 2 Avg. [CO] (ppm)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	0.1888	0.2016	6.7857%	3.11×10^{-2}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	0.1888	0.1961	3.8437%	1.07×10^{-1}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	0.1888	0.1921	1.7631%	4.04×10^{-1}
May	Jan 1–Mar 23	May 20–June 30	0.1888	0.1743	−7.6585%	1.61×10^{-4}
June 30	Jan 1–Mar 22	Mar 23–June 30	0.1888	0.1853	−1.8422%	3.18×10^{-1}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	0.1888	0.2231	18.1550%	2.86×10^{-27}

2019

Time Periods Compared			Taft			
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [CO] (ppm)	Time Period 2 Avg. [CO] (ppm)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	0.2041	0.1841	−9.7928%	7.719×10^{-4}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	0.2041	0.1690	−17.2144%	6.424×10^{-15}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	0.2041	0.1668	−18.2727%	9.496×10^{-21}
May	Jan 1–Mar 23	May 20–June 30	0.2041	0.1403	−31.2874%	7.619×10^{-62}
June 30	Jan 1–Mar 22	Mar 23–June 30	0.2041	0.1564	−23.3839%	1.308×10^{-42}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	0.2041	0.1833	−10.1923%	5.100×10^{-11}

2018

Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [CO] (ppm)	Time Period 2 Avg. [CO] (ppm)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	0.2090	0.1516	−27.4589%	4.976×10^{-22}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	0.2090	0.1722	−17.5692%	3.815×10^{-16}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	0.2090	0.1890	−9.5576%	5.635×10^{-7}
May	Jan 1–Mar 23	May 20–June 30	0.2090	0.1795	−14.1020%	1.530×10^{-14}
June 30	Jan 1–Mar 22	Mar 23–June 30	0.2090	0.1847	−11.6338%	2.328×10^{-8}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	0.2090	0.1590	−23.8980%	6.889×10^{-56}

2017

Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [CO] (ppm)	Time Period 2 Avg. [CO] (ppm)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	0.1601	0.1213	−24.2220%	6.922×10^{-11}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	0.1601	0.1652	3.2124%	2.538×10^{-1}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	0.1601	0.1778	11.0605%	9.161×10^{-6}
May	Jan 1–Mar 23	May 20–June 30	0.1601	0.1814	13.2869%	2.855×10^{-8}
June 30	Jan 1–Mar 22	Mar 23–June 30	0.1601	0.1792	11.9340%	4.251×10^{-8}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	0.1601	0.2166	35.3212%	4.184×10^{-71}

2016

Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [CO] (ppm)	Time Period 2 Avg. [CO] (ppm)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	0.2605	0.1996	−23.3784%	1.297×10^{-24}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	0.2605	0.2369	−9.0592%	5.376×10^{-65}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	0.2605	0.2346	−9.9586%	1.790×10^{-77}
May	Jan 1–Mar 23	May 20–June 30	0.2605	0.2353	−9.6727%	4.915×10^{-11}
June 30	Jan 1–Mar 22	Mar 23–June 30	0.2605	0.2348	−9.8686%	1.691×10^{-101}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	0.2605	0.1839	−29.4169%	5.963×10^{-14}

Table S21. Results of interannual *t*-tests for CO concentrations over time periods of interest at the Taft site for each year 2016 through 2020.

Pre COVID: Jan 1–Mar 22					
Year 1	Year 2	Year 1 Avg. [CO] (ppm)	Year 2 Avg. [CO] (ppm)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> - value
2019	2020	0.2041	0.1888	−7.5097%	2.876×10^{-5}
2018	2020	0.2090	0.1888	−9.6504%	3.743×10^{-8}
2017	2020	0.1601	0.1888	17.9287%	4.842×10^{-15}
2016	2020	0.2605	0.1888	−27.5300%	5.102×10^{-85}
Beginning of Lockdown: March 23–April 10					
Year 1	Year 2	Year 1 Avg. [CO] (ppm)	Year 2 Avg. [CO] (ppm)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> - value
2019	2020	0.1841	0.2016	9.4884%	2.093×10^{-2}
2018	2020	0.1516	0.2016	33.0011%	3.828×10^{-11}
2017	2020	0.1213	0.2016	66.1840%	2.762×10^{-26}
2016	2020	0.1996	0.2016	0.9997%	7.920×10^{-1}
Lockdown: March 23–May 1					
Year 1	Year 2	Year 1 Avg. [CO] (ppm)	Year 2 Avg. [CO] (ppm)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> - value
2019	2020	0.1690	0.1961	16.0171%	2.101×10^{-7}
2018	2020	0.1722	0.1961	13.8196%	5.002×10^{-6}
2017	2020	0.1652	0.1961	18.6500%	3.441×10^{-9}
2016	2020	0.2369	0.1961	−17.2477%	4.712×10^{-15}
Full Opening: March 23–May 20					
Year 1	Year 2	Year 1 Avg. [CO] (ppm)	Year 2 Avg. [CO] (ppm)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> - value
2019	2020	0.1668	0.1921	15.1647%	3.827×10^{-9}
2018	2020	0.1890	0.1921	1.6588%	4.653×10^{-1}
2017	2020	0.1778	0.1921	8.0563%	8.496×10^{-4}
2016	2020	0.2346	0.1921	−18.0958%	4.967×10^{-23}

NO_x Near Road

2020					
Period 1	Time Period 2	Time Period 1 Avg. [NO _x] (μg/m ³)	Time Period 2 Avg. [NO _x] (μg/m ³)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> - value
-Mar 22	Mar 23–Apr 10	48.0957	40.4561	−15.8840%	3.45×10^{-4}
-Mar 22	Mar 23–May 1	48.0957	34.3302	−28.6210%	1.84×10^{-17}
-Mar 22	Mar 23–May 20	48.0957	32.1314	−33.1928%	8.79×10^{-29}
-Mar 23	May 20–June 30	48.0957	19.2143	−60.0499%	4.16×10^{-66}
-Mar 22	Mar 23–June 30	48.0957	27.0275	−43.8047%	2.12×10^{-63}
-Mar 22	July 1–Dec 11	48.0957	50.4609	4.9177%	3.76×10^{-2}
2019					
Period 1	Time Period 2	Time Period 1 Avg. [NO _x] (μg/m ³)	Time Period 2 Avg. [NO _x] (μg/m ³)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> - value
-Mar 22	Mar 23–Apr 10	46.7922	53.5504	14.4431%	1.55×10^{-3}
-Mar 22	Mar 23–May 1	46.7922	37.7396	−19.3464%	2.23×10^{-8}
-Mar 22	Mar 23–May 20	46.7922	37.2500	−20.3927%	2.81×10^{-11}
-Mar 23	May 20–June 30	46.7922	32.6855	−30.1475%	3.75×10^{-17}
-Mar 22	Mar 23–June 30	46.7922	35.4621	−24.2137%	1.46×10^{-19}
-Mar 22	July 1–Dec 11	46.7922	42.8526	−8.4192%	5.33×10^{-4}
2018					

Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [NO _x] (µg/m ³)	Time Period 2 Avg. [NO _x] (µg/m ³)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	44.8529	50.2303	11.9889%	1.18×10^{-2}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	44.8529	27.2583	−39.2272%	1.67×10^{-27}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	44.8529	30.6264	−31.7181%	3.37×10^{-23}
May	Jan 1–Mar 23	May 20–June 30	44.8529	16.9980	−62.1027%	1.16×10^{-61}
June 30	Jan 1–Mar 22	Mar 23–June 30	44.8529	24.7954	−44.7183%	6.24×10^{-69}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	44.8529	47.0732	4.9502%	5.09×10^{-2}

2017						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [NO _x] (µg/m ³)	Time Period 2 Avg. [NO _x] (µg/m ³)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	47.6255	39.9561	−16.1035%	3.27×10^{-4}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	47.6255	41.6385	−12.5709%	2.16×10^{-4}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	47.6255	42.4583	−10.8496%	3.12×10^{-4}
May	Jan 1–Mar 23	May 20–June 30	47.6255	42.1756	−11.4433%	1.13×10^{-3}
June 30	Jan 1–Mar 22	Mar 23–June 30	47.6255	42.4483	−10.8706%	3.54×10^{-5}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	47.6255	56.9606	19.6011%	2.29×10^{-16}

2016						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [NO _x] (µg/m ³)	Time Period 2 Avg. [NO _x] (µg/m ³)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	58.6950	35.0351	−40.3099%	1.61×10^{-28}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	58.6950	48.8156	−16.8317%	4.62×10^{-1}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	58.6950	51.8764	−11.6169%	3.02×10^{-3}
May	Jan 1–Mar 23	May 20–June 30	58.6950	52.0526	−11.3168%	7.23×10^{-5}
June 30	Jan 1–Mar 22	Mar 23–June 30	58.6950	51.6638	−11.9792%	1.26×10^{-3}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	58.6950	56.5579	−3.6409%	4.09×10^{-15}

Table S23. Results of interannual *t*-tests for NO_x concentrations over time periods of interest at the Near Road site for each year 2016 through 2020.

Pre COVID: Jan 1–Mar 22					
Year 1	Year 2	Year 1 Avg. [NO _x] (ppb)	Year 2 Avg. [NO _x] (ppb)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	46.7922	48.0957	2.7857%	3.219×10^{-1}
2018	2020	44.8529	48.0957	7.2299%	1.373×10^{-2}
2017	2020	47.6255	48.0957	0.9872%	7.209×10^{-1}
2016	2020	58.6950	48.0957	−18.0582%	8.115×10^{-16}

Beginning of Lockdown: March 23–April 10					
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Year 1	Year 2	Year 1 Avg. [NO _x] (ppb)	Year 2 Avg. [NO _x] (ppb)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	53.5504	40.4561	−24.4523%	1.443×10^{-6}
2018	2020	50.2303	40.4561	−19.4586%	3.217×10^{-4}
2017	2020	39.9561	40.4561	1.2514%	8.540×10^{-1}
2016	2020	35.0351	40.4561	15.4732%	4.602×10^{-2}

Lockdown: March 23–May 1					
Year 1	Year 2	Year 1 Avg. [NO _x] (ppb)	Year 2 Avg. [NO _x] (ppb)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	37.7396	34.3302	−9.0339%	6.866×10^{-2}
2018	2020	27.2583	34.3302	25.9439%	1.591×10^{-4}
2017	2020	41.6385	34.3302	−17.5518%	9.516×10^{-5}
2016	2020	48.8156	34.3302	−29.6737%	1.046×10^{-14}

Full Opening: March 23–May 20					
Year 1	Year 2	Year 1 Avg. [NO _x] (ppb)	Year 2 Avg. [NO _x] (ppb)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	37.2500	32.1314	−13.7413%	9.012×10^{-4}
2018	2020	30.6264	32.1314	4.9139%	3.290×10^{-1}
2017	2020	42.4583	32.1314	−24.3226%	2.135×10^{-11}
2016	2020	51.8764	32.1314	−38.0617%	1.709×10^{-37}

May: May 20–June 30					
Year 1	Year 2	Year 1 Avg. [NO _x] (ppb)	Year 2 Avg. [NO _x] (ppb)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	32.6855	19.2143	58.7853%	2.397×10^{-12}
2018	2020	16.9980	19.2143	113.0384%	2.485×10^{-1}
2017	2020	42.1756	19.2143	45.5578%	8.447×10^{-33}
2016	2020	52.0526	19.2143	36.9132%	6.203×10^{-65}

Through June: March 23–June 30					
Year 1	Year 2	Year 1 Avg. [NO _x] (ppb)	Year 2 Avg. [NO _x] (ppb)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	35.4621	27.0275	−23.7848%	1.077×10^{-12}
2018	2020	24.7954	27.0275	9.0020%	5.947×10^{-2}
2017	2020	42.4483	27.0275	−36.3285%	1.059×10^{-38}
2016	2020	51.6638	27.0275	−47.6858%	9.570×10^{-96}

Second Half of Year: July 1–Dec 11					
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Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [NO ₂] (ppb)	Time Period 2 Avg. [NO ₂] (ppb)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	47.6255	39.9561	−16.1035%	3.27×10^{-4}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	47.6255	41.6385	−12.5709%	2.16×10^{-4}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	47.6255	42.4583	−10.8496%	3.12×10^{-4}
June 30	Jan 1–Mar 22	Mar 23–June 30	47.6255	42.4483	−10.8706%	3.54×10^{-5}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	47.6255	56.9606	19.6011%	2.29×10^{-16}

2016						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [NO ₂] (ppb)	Time Period 2 Avg. [NO ₂] (ppb)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	58.6950	35.0351	−40.3099%	1.61×10^{-28}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	58.6950	48.8156	−16.8317%	4.62×10^{-1}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	58.6950	51.8764	−11.6169%	3.02×10^{-3}
June 30	Jan 1–Mar 22	Mar 23–June 30	58.6950	51.6638	−11.9792%	1.26×10^{-3}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	58.6950	56.5579	−3.6409%	4.09×10^{-15}

Table S25. Results of interannual *t*-tests for NO₂ concentrations over time periods of interest at the Near Road site for each year 2016 through 2020.

Pre COVID: Jan 1–Mar 22					
Year 1	Year 2	Year 1 Avg. [NO ₂] (ppb)	Year 2 Avg. [NO ₂] (ppb)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	46.7922	48.0957	2.7857%	3.219×10^{-1}
2018	2020	44.8529	48.0957	7.2299%	1.373×10^{-2}
2017	2020	47.6255	48.0957	0.9872%	7.209×10^{-1}
2016	2020	58.6950	48.0957	−18.0582%	8.115×10^{-16}

Beginning of Lockdown: March 23–April 10					
Year 1	Year 2	Year 1 Avg. [NO ₂] (ppb)	Year 2 Avg. [NO ₂] (ppb)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	53.5504	40.4561	−24.4523%	1.443×10^{-6}
2018	2020	50.2303	40.4561	−19.4586%	3.217×10^{-4}
2017	2020	39.9561	40.4561	1.2514%	8.540×10^{-1}
2016	2020	35.0351	40.4561	15.4732%	4.602×10^{-2}

Lockdown: March 23–May 1					
Year 1	Year 2	Year 1 Avg. [NO ₂] (ppb)	Year 2 Avg. [NO ₂] (ppb)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value

2019	2020	37.7396	34.3302	−9.0339%	6.866×10^{-2}
2018	2020	27.2583	34.3302	25.9439%	1.591×10^{-4}
2017	2020	41.6385	34.3302	−17.5518%	9.516×10^{-5}
2016	2020	48.8156	34.3302	−29.6737%	1.046×10^{-14}

Full Opening: March 23–May 20					
Year 1	Year 2	Year 1 Avg. [NO ₂] (ppb)	Year 2 Avg. [NO ₂] (ppb)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	37.2500	32.1314	−13.7413%	9.012×10^{-4}
2018	2020	30.6264	32.1314	4.9139%	3.290×10^{-1}
2017	2020	42.4583	32.1314	−24.3226%	2.135×10^{-11}
2016	2020	51.8764	32.1314	−38.0617%	1.709×10^{-37}

Through June: March 23–June 30					
Year 1	Year 2	Year 1 Avg. [NO ₂] (ppb)	Year 2 Avg. [NO ₂] (ppb)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	35.4621	27.0275	−23.7848%	1.077×10^{-12}
2018	2020	24.7954	27.0275	9.0020%	5.947×10^{-2}
2017	2020	42.4483	27.0275	−36.3285%	1.059×10^{-38}
2016	2020	51.6638	27.0275	−47.6858%	9.570×10^{-96}

Second Half of Year: July 1–Dec 11					
Year 1	Year 2	Year 1 Avg. [NO ₂] (ppb)	Year 2 Avg. [NO ₂] (ppb)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	42.8526	50.4609	17.7544%	1.960×10^{-16}
2018	2020	47.0732	50.4609	7.1967%	2.493×10^{-4}
2017	2020	56.9606	50.4609	−11.4109%	2.113×10^{-12}
2016	2020	56.5579	50.4609	−10.7802%	4.350×10^{-11}

*O*₃ Taft

Table S26. Results of interannual *t*-tests for *O*₃ concentrations over time periods of interest at the Taft site for each year 2016 through 2020.

2020						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [O ₃] (ppb)	Time Period 2 Avg. [O ₃] (ppb)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	20.4177	30.9803	51.7324%	1.63×10^{-48}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	20.4177	32.7792	60.5429%	9.61×10^{-113}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	20.4177	32.4626	58.9923%	6.49×10^{-136}
May	Jan 1–Mar 23	May 20–June 30	20.4177	34.6498	69.7048%	1.25×10^{-167}
June 30	Jan 1–Mar 22	Mar 23–June 30	20.4177	33.3929	63.5489%	4.04×10^{-205}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	20.4177	25.5229	25.0037%	2.99×10^{-40}

2019						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [O ₃] (ppb)	Time Period 2 Avg. [O ₃] (ppb)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	24.9167	34.9145	40.1250%	1.176×10^{-43}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	24.9167	35.9594	44.3186%	1.916×10^{-90}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	24.9167	34.5777	38.7733%	2.633×10^{-88}
May	Jan 1–Mar 23	May 20–June 30	24.9167	32.7411	31.4023%	6.732×10^{-53}
June 30	Jan 1–Mar 22	Mar 23–June 30	24.9167	33.8488	35.8478%	1.103×10^{-98}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	24.9167	28.7144	15.2419%	4.925×10^{-23}
2018						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [O ₃] (ppb)	Time Period 2 Avg. [O ₃] (ppb)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	26.4172	32.2368	22.0298%	7.036×10^{-16}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	26.4172	36.0927	36.6259%	6.250×10^{-70}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	26.4172	36.6229	38.6328%	2.786×10^{-98}
May	Jan 1–Mar 23	May 20–June 30	26.4172	36.8770	39.5947%	1.633×10^{-92}
June 30	Jan 1–Mar 22	Mar 23–June 30	26.4172	36.6742	38.8269%	4.791×10^{-169}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	26.4172	24.0480	−8.9683%	6.956×10^{-10}
2017						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [O ₃] (ppb)	Time Period 2 Avg. [O ₃] (ppb)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	25.1188	37.0219	47.3872%	4.317×10^{-61}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	25.1188	36.6458	45.8899%	2.394×10^{-98}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	25.1188	37.0621	47.5473%	1.118×10^{-133}
May	Jan 1–Mar 23	May 20–June 30	25.1188	37.7312	50.2106%	8.605×10^{-133}
June 30	Jan 1–Mar 22	Mar 23–June 30	25.1188	37.4708	49.1743%	3.149×10^{-186}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	25.1188	27.1629	8.1374%	1.032×10^{-7}
2016						
Time Period Description	Time Period 1	Time Period 2	Time Period 1 Avg. [O ₃] (ppb)	Time Period 2 Avg. [O ₃] (ppb)	% Change Between Time Periods	Two-sided <i>t</i> -test <i>p</i> -value
Beginning of Lockdown	Jan 1–Mar 22	Mar 23–Apr 10	23.8668	32.8969	37.8357%	6.058×10^{-36}
Lockdown	Jan 1–Mar 22	Mar 23–May 1	23.8668	34.3458	43.9065%	8.831×10^{-64}
Full Opening	Jan 1–Mar 22	Mar 23–May 20	23.8668	33.5177	40.4365%	2.963×10^{-67}
May	Jan 1–Mar 23	May 20–June 30	23.8668	41.5060	73.9069%	5.644×10^{-253}
June 30	Jan 1–Mar 22	Mar 23–June 30	23.8668	36.8483	54.3918%	2.946×10^{-168}
Second Half of Year	Jan 1–Mar 22	July 1–Dec 11	23.8668	26.1756	9.6737%	5.939×10^{-3}

Table S27. Results of interannual *t*-tests for O₃ concentrations over time periods of interest at the Taft site for each year 2016 through 2020.

Pre COVID: Jan 1–Mar 22					
Year 1	Year 2	Year 1 Avg. [O ₃] (ppb)	Year 2 Avg. [O ₃] (ppb)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	24.9167	20.4177	−18.0561%	4.571×10^{-24}
2018	2020	26.4172	20.4177	−22.7105%	1.828×10^{-41}
2017	2020	25.1188	20.4177	−18.7156%	3.985×10^{-26}
2016	2020	23.8668	20.4177	−14.4514%	8.579×10^{-15}
Beginning of Lockdown: March 23–April 10					
Year 1	Year 2	Year 1 Avg. [O ₃] (ppb)	Year 2 Avg. [O ₃] (ppb)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	34.9145	30.9803	−11.2681%	1.810×10^{-5}
2018	2020	32.2368	30.9803	−3.8980%	1.709×10^{-1}
2017	2020	37.0219	30.9803	−16.3192%	4.616×10^{-11}
2016	2020	32.8969	30.9803	−5.8263%	3.673×10^{-2}
Lockdown: March 23–May 1					
Year 1	Year 2	Year 1 Avg. [O ₃] (ppb)	Year 2 Avg. [O ₃] (ppb)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	35.9594	32.7792	−8.8439%	4.955×10^{-7}
2018	2020	36.0927	32.7792	−9.1806%	1.616×10^{-7}
2017	2020	36.6458	32.7792	−10.5514%	9.776×10^{-10}
2016	2020	34.3458	32.7792	−4.5614%	1.324×10^{-2}
Full Opening: March 23–May 20					
Year 1	Year 2	Year 1 Avg. [O ₃] (ppb)	Year 2 Avg. [O ₃] (ppb)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	34.5777	32.4626	−6.1170%	4.875×10^{-5}
2018	2020	36.6229	32.4626	−11.3599%	1.381×10^{-15}
2017	2020	37.0621	32.4626	−12.4104%	1.048×10^{-18}
2016	2020	33.5177	32.4626	−3.1478%	4.275×10^{-2}
May: May 20–June 30					
Year 1	Year 2	Year 1 Avg. [O ₃] (ppb)	Year 2 Avg. [O ₃] (ppb)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	32.7411	34.6498	5.8298%	1.089×10^{-3}
2018	2020	36.8770	34.6498	−6.0395%	1.384×10^{-4}
2017	2020	37.7312	34.6498	−8.1666%	1.353×10^{-7}
2016	2020	41.5060	34.6498	−16.5185%	1.165×10^{-31}
Through June: March 23–June 30					
Year 1	Year 2	Year 1 Avg. [O ₃] (ppb)	Year 2 Avg. [O ₃] (ppb)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	33.8488	33.3929	−1.3467%	2.544×10^{-1}

2018	2020	36.6742	33.3929	−8.9470%	2.383×10^{-16}
2017	2020	37.4708	33.3929	−10.8829%	2.185×10^{-24}
2016	2020	36.8483	33.3929	−9.3774%	5.817×10^{-18}

Second Half of Year: July 1–Dec 11					
Year 1	Year 2	Year 1 Avg. [O ₃] (ppb)	Year 2 Avg. [O ₃] (ppb)	% Change Between Years	Two-sided <i>t</i> -test <i>p</i> -value
2019	2020	28.7144	25.5229	−11.1148%	1.721×10^{-24}
2018	2020	24.0480	25.5229	6.1329%	2.340×10^{-6}
2017	2020	27.1629	25.5229	−6.0376%	1.520×10^{-7}
2016	2020	26.1756	25.5229	−2.4935%	3.664×10^{-2}

Meteorological Data Summary

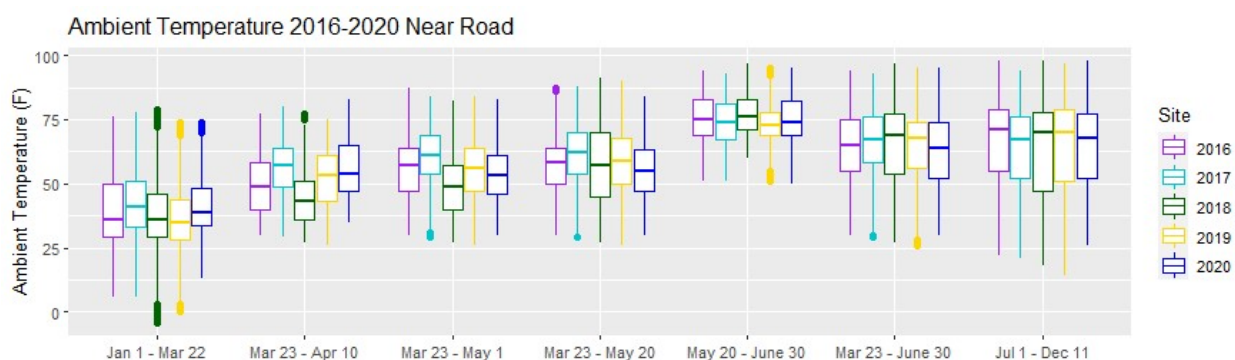


Figure S5. Boxplots of ambient temperature at the Near Road site during each time period of interest 2016 through 2020.

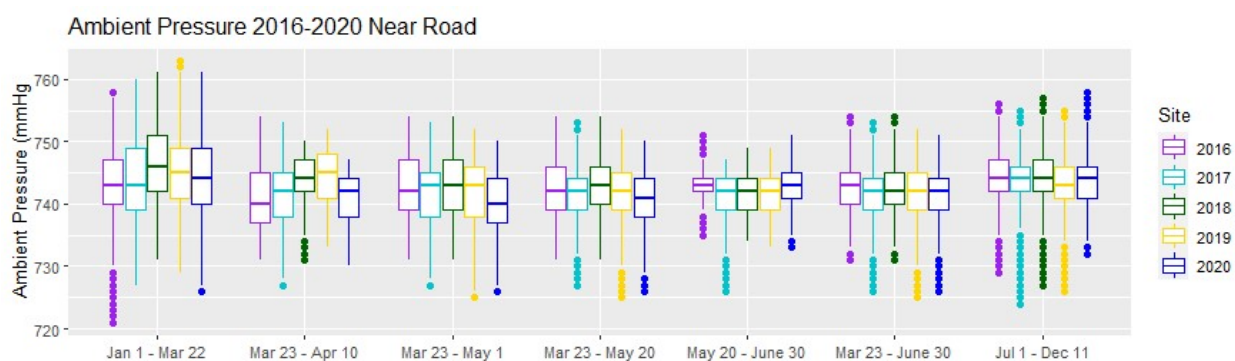


Figure S6. Boxplots of ambient pressure at the Near Road site during each time period of interest 2016 through 2020.

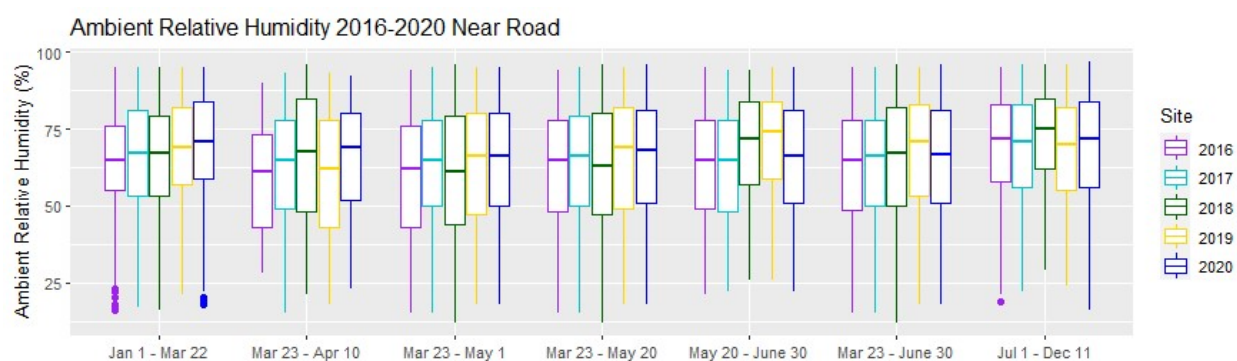


Figure S7. Boxplots of ambient relative humidity at the Near Road site during each time period of interest 2016 through 2020.

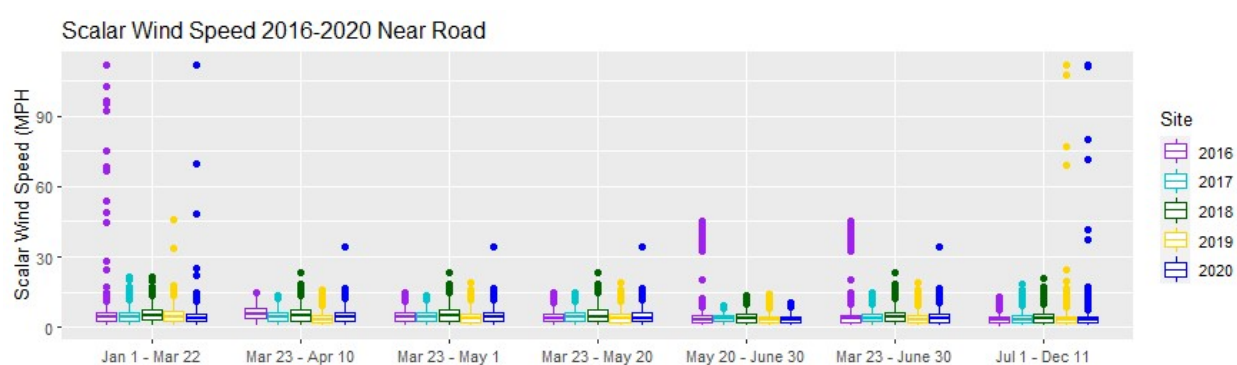


Figure S8. Boxplots of scalar wind speed at the Near Road site during each time period of interest 2016 through 2020.

Table S28. Mean and standard deviation of meteorological terms analyzed at the Near Road site during each time period of interest 2016 through 2020.

Time Period	Year	Ambient Temperature (°F)	Ambient Pressure (mmHg)	Ambient Relative Humidity (%)	Scalar Wind Speed (mph)
Jan 1–Mar 22	2016	38.771 (11.278)	742.99 (5.705)	64.754 (15.798)	5.842 (11.278)
	2017	41.578 (2.756)	743.631 (6.622)	65.71 (17.986)	4.811 (2.756)
	2018	36.407 (2.971)	745.963 (6.141)	65.312 (17.274)	5.369 (2.971)
	2019	35.954 (3.215)	744.74 (5.74)	67.904 (16.629)	5.055 (3.215)
	2020	40.533 (4.621)	744.593 (6.442)	69.371 (17.252)	4.512 (4.621)
Mar 23–April 10	2016	49.612 (3.138)	741.007 (5.457)	59.263 (16.663)	6.046 (3.138)
	2017	56.906 (2.718)	740.855 (5.715)	62.607 (19.791)	5.085 (2.718)
	2018	44.004 (3.452)	743.901 (4.056)	65.708 (20.861)	5.505 (3.452)
	2019	51.689 (2.668)	744.741 (4.389)	59.686 (21.061)	3.894 (2.668)
	2020	55.728 (3.06)	740.607 (3.667)	65.526 (17.547)	4.755 (3.06)
Mar 23–May 1	2016	56.33 (2.795)	742.49 (5.12)	60.205 (19.499)	4.821 (2.795)
	2017	61.302 (2.55)	741.67 (5.39)	62.855 (18.657)	4.856 (2.55)
	2018	49.7 (3.452)	743.145 (4.868)	60.129 (21.602)	5.611 (3.452)
	2019	55.769 (2.816)	742.117 (5.489)	63.138 (19.949)	4.378 (2.816)
	2020	53.848 (2.909)	740.165 (4.404)	63.89 (19.375)	4.707 (2.909)
Mar 23–May 20	2016	57.143 (2.597)	742.406 (4.661)	62.892 (19.11)	4.396 (2.597)
	2017	62.064 (2.483)	741.14 (4.939)	63.84 (18.713)	4.656 (2.483)
	2018	57.155 (3.313)	742.908 (4.171)	62.277 (20.404)	5.342 (3.313)

May 20– June 30	2019	58.869 (2.643)	741.952 (4.807)	65.188 (19.707)	4.197 (2.643)
	2020	55.207 (2.802)	740.872 (4.26)	65.163 (19.51)	4.53 (2.802)
	2016	75.407 (5.635)	742.784 (2.859)	62.821 (17.977)	4.487 (5.635)
	2017	73.441 (1.656)	741.103 (3.85)	63.563 (18.157)	3.709 (1.656)
	2018	76.917 (2.333)	741.524 (2.841)	69.348 (16.455)	4.174 (2.333)
	2019	73.432 (2.097)	741.673 (3.336)	70.699 (16.659)	3.656 (2.097)
Mar 23– June 30	2020	74.463 (1.924)	742.872 (3.449)	65.109 (18.603)	3.569 (1.924)
	2016	64.776 (4.157)	742.547 (4.029)	62.793 (18.661)	4.447 (4.157)
	2017	66.77 (2.232)	741.098 (4.531)	63.522 (18.439)	4.268 (2.232)
	2018	65.266 (3.002)	742.312 (3.75)	65.15 (19.191)	4.873 (3.002)
	2019	65.117 (2.434)	741.825 (4.259)	67.549 (18.685)	3.948 (2.434)
	2020	63.29 (2.528)	741.685 (4.079)	64.989 (19.16)	4.127 (2.528)
June 30– Dec 11	2016	66.684 (1.789)	744.622 (3.651)	69.781 (15.138)	3.317 (1.789)
	2017	63.726 (2.315)	743.91 (3.749)	68.944 (16.148)	3.728 (2.315)
	2018	63.626 (2.395)	744.069 (4.194)	72.199 (15.338)	4.142 (2.395)
	2019	65.288 (4.314)	743.345 (3.96)	67.729 (16.494)	3.637 (4.314)
	2020	64.989 (4.69)	743.72 (3.768)	69.008 (17.121)	3.603 (4.69)
	Year Averages				
2016		58.389 (4.484)	742.692 (4.497)	63.216 (17.55)	4.765 (4.484)
2017		60.827 (2.387)	741.915 (4.971)	64.434 (18.27)	4.445 (2.387)
2018		56.153 (2.988)	743.403 (4.289)	65.732 (18.732)	5.002 (2.988)
2019		58.017 (2.884)	742.913 (4.569)	65.985 (18.455)	4.109 (2.884)
2020		58.294 (3.219)	742.073 (4.296)	66.151 (18.367)	4.258 (3.219)

Table S29. Median of meteorological terms analyzed at the Near Road site during each time period of interest 2016 through 2020.

Time Period	Year	Ambient Temperature (°F)	Ambient Pressure (mmHg)	Ambient Relative Humidity (%)	Scalar Wind Speed (mph)
Jan 1–Mar 22	2016	36.000	743.000	65.000	4.200
	2017	41.000	743.000	67.000	4.300
	2018	36.000	746.000	67.000	4.800
	2019	35.000	745.000	69.000	4.300
	2020	39.000	744.000	71.000	3.900
Mar 23–April 10	2016	49.000	740.000	61.000	5.550
	2017	57.000	742.000	65.000	4.700
	2018	43.000	744.000	67.500	5.000
	2019	53.000	745.000	62.000	3.100
	2020	54.000	742.000	69.000	4.400
Mar 23–May 1	2016	57.000	742.000	62.000	4.200
	2017	61.000	743.000	65.000	4.600
	2018	49.000	743.000	61.000	5.000
	2019	56.000	743.000	66.000	3.700
	2020	53.000	740.000	66.000	4.300
Mar 23–May 20	2016	58.000	742.000	65.000	3.800
	2017	62.000	742.000	66.000	4.300
	2018	57.000	743.000	63.000	4.700
	2019	59.000	742.000	69.000	3.600
	2020	55.000	741.000	68.000	4.100
2016		75.000	743.000	65.000	3.300

May 20–June 30	2017	74.000	742.000	65.000	3.600
	2018	76.000	742.000	72.000	3.700
	2019	73.000	742.000	74.000	3.400
	2020	74.000	743.000	66.000	3.200
Mar 23–June 30	2016	65.000	743.000	65.000	3.600
	2017	67.000	742.000	66.000	4.000
	2018	69.000	742.000	67.000	4.200
	2019	68.000	742.000	71.000	3.400
	2020	64.000	742.000	66.500	3.700
June 30–Dec 11	2016	71.000	744.000	72.000	3.000
	2017	67.000	744.000	71.000	3.100
	2018	70.000	744.000	75.000	3.600
	2019	70.000	743.000	70.000	3.000
	2020	68.000	744.000	72.000	3.000
Year Averages					
	2016	58.7143	742.4286	65.0000	3.9500
	2017	61.2857	742.5714	66.4286	4.0857
	2018	57.1429	743.4286	67.5000	4.4286
	2019	59.1429	743.1429	68.7143	3.5000
	2020	58.1429	742.2857	68.3571	3.8000

Table S30. Median of meteorological terms analyzed at the Near Road site during each time period of interest 2016 through 2020.

Time Period	Year	Ambient Temperature (°F)	Ambient Pressure (mmHg)	Ambient Relative Humidity (%)	Scalar Wind Speed (mph)
Jan 1–Mar 22	2016	6–76	721–758	16–95	0.5–111.8
	2017	6–78	727–760	17–95	0.8–21.8
	2018	−4–79	731–761	16–95	0.7–21.8
	2019	0–74	729–763	21–95	0.6–45.8
	2020	13–74	726–761	18–95	0.5–111.8
Mar 23–April 10	2016	30–77	731–754	28–90	0.7–14.8
	2017	29–80	727–753	15–93	0.5–13.4
	2018	27–77	731–750	21–96	0.7–23.4
	2019	26–75	733–752	18–93	0.6–15.9
	2020	35–83	730–747	23–92	0.6–34.5
Mar 23–May 1	2016	30–87	731–754	15–94	0.7–14.8
	2017	29–84	727–753	15–95	0.5–13.4
	2018	27–82	731–754	12–96	0.7–23.4
	2019	26–84	725–752	18–95	0.6–19.3
	2020	30–83	726–750	18–95	0.6–34.5
Mar 23–May 20	2016	30–87	731–754	15–94	0.7–14.8
	2017	29–88	727–753	15–95	0.5–14.6
	2018	27–91	731–754	12–96	0.7–23.4
	2019	26–90	725–752	18–95	0.6–19.3
	2020	30–84	726–750	18–96	0.6–34.5
May 20–June 30	2016	51–94	735–751	21–95	0.6–45.4
	2017	51–93	726–747	22–94	0.6–9.4
	2018	60–97	734–749	26–94	0.9–13.5
	2019	51–95	733–749	26–95	0.7–14.1
	2020	50–95	733–751	22–95	0.6–10.8

Mar 23– June 30	2016	30–94	731–754	15–95	0.6–45.4
	2017	29–93	726–753	15–95	0.5–14.6
	2018	27–97	731–754	12–96	0.7–23.4
	2019	26–95	725–752	18–95	0.6–19.3
	2020	30–95	726–751	18–96	0.6–34.5
June 30– Dec 11	2016	22–98	729–756	19–95	0.4–13
	2017	21–94	724–755	22–96	0.5–18.4
	2018	18–98	727–757	29–96	0.8–20.7
	2019	14–97	726–755	24–96	0.6–111.8
	2020	26–98	732–758	16–97	0.7–111.9
Year Averages					
2016	28.429–87.571	729.857–754.429	18.429–94	0.6–37.143	
2017	27.714–87.143	726.286–753.429	17.286–94.714	0.557–15.086	
2018	26–88.714	730.857–754.143	18.286–95.571	0.743–21.371	
2019	24.143–87.143	728–753.571	20.429–94.857	0.614–35.071	
2020	30.571–87.429	728.429–752.571	19–95.143	0.6–53.214	

Tukey Test Difference and 95% Confidence Intervals

Table S31. Difference in intra-annual 2020 PM_{2.5} concentrations (µg/m³), as well as 95% confidence interval of each indicated time period at Near Road.

	Jan 1–Mar 22	Mar 23–Apr 10	Mar 23–May 1	Mar 23–May 20	May 20–June 30	Mar 23–June 30
Mar 23–Apr 10	−0.13 (−0.22– −2.99)	-	-	-	-	-
Mar 23–May 1	0.06 (−1.02–1.08)	−0.19 (−3.15– −0.12)	-	-	-	-
Mar 23–May 20	0.08 (−0.62–1.25)	−0.21 (−3.36– −0.49)	−0.01 (−1.41– 0.83)	-	-	-
May 20–June 30	−0.08 (−1.22– 0.86)	−0.05 (−2.93– 0.08)	0.14 (−0.99–1.41)	0.15 (1.6–−0.6)	-	-
Mar 23–June 30	0.01 (−0.76–0.87)	−0.14 (−3.02– −0.3)	0.05 (−0.63–0.99)	0.07 (−1.04–1.17)	−0.07 (−1.16– 0.63)	-
July 1–Dec 11	−0.6 (−2.13– −0.66)	0.47 (−1.52–1.11)	0.06 (0.97–2.88)	0.67 (0.89–2.54)	0.52 (0.28–2.16)	0.61 (0.76–2.14)

Table S32. Difference in interannual PM_{2.5} concentrations (µg/m³) 2017–2019 compared to 2020, as well as 95% confidence interval of each indicated time period at Near Road.

	2019	2018	2017
Jan 1–Mar 22	−2.12 (−2.98–−1.26)	1.03 (0.18–1.89)	0.04 (−0.81–0.9)
Mar 23–Apr 10	−1.01 (−2.78–0.76)	3.15 (1.38–4.91)	2.41 (0.64–4.18)
Mar 23–May 1	−1.28 (−2.5–−0.06)	0.7 (−0.66–2.05)	−0.27 (−1.49–0.95)
Mar 23–May 20	−1.46 (−2.5–−0.42)	−2.41 (−3.48–−1.33)	−0.81 (−1.82–0.2)
May 20–June 30	−0.11 (−1.3–1.08)	−2.59 (−3.78–−1.39)	0.49 (−0.7–1.69)
Mar 23–June 30	−0.86 (−1.64–−0.07)	−2.44 (−3.24–−1.64)	−0.19 (−0.96–0.58)
July 1–Dec 11	−0.5 (−1.1–0.1)	−1.94 (−2.57–−1.3)	−1.11 (−1.71–−0.52)

Table S33. Difference in intra-annual 2020 PM_{2.5} concentrations (µg/m³), as well as 95% confidence interval of each indicated time period at Taft.

	Jan 1–Mar 22	Mar 23–Apr 10	Mar 23–May 1	Mar 23–May 20	May 20–June 30	Mar 23–June 30
Mar 23–Apr 10	−1.92 (−2.91– −0.92)	-	-	-	-	-
Mar 23–May 1	−0.77 (−1.53– −0.02)	−1.15 (−2.24– −0.06)	-	-	-	-
Mar 23–May 20	−0.33 (−1–0.34)	−1.59 (−2.62– −0.56)	−0.44 (−1.24– 0.36)	-	-	-
May 20–June 30	−1.27 (−2.01– −0.52)	−0.65 (−1.73– 0.43)	0.5 (−0.37–1.36)	0.94 (1.73–0.15)	-	-
Mar 23–June 30	−0.77 (−1.36– −0.19)	−1.15 (−2.13– −0.17)	0 (−0.73–0.73)	0.44 (−0.2–1.08)	−0.44 (−1.08–0.2)	-
July 1–Dec 11	−1.16 (−1.69– −0.63)	−0.76 (−1.7–0.19)	1.61 (0.92–2.29)	0.83 (0.24–1.43)	−0.1 (−0.78–0.57)	0.39 (−0.11–0.89)

Table S34. Difference in interannual PM_{2.5} concentrations (µg/m³) 2016–2019 compared to 2020, as well as 95% confidence interval of each indicated time period at Taft.

	2019	2018	2017	2016
Jan 1–Mar 22	−1.89 (−2.59–−1.2)	−1.45 (−2.15–−0.76)	1.19 (0.49–1.88)	0.49 (−0.21–1.18)
Mar 23–Apr 10	0.12 (−1.32–1.55)	2.54 (1.1–3.97)	3.75 (2.32–5.19)	4.24 (2.8–5.68)
Mar 23–May 1	0.01 (−0.98–1)	1.06 (0.07–2.05)	1.88 (0.89–2.87)	1.42 (0.44–2.41)
Mar 23–May 20	−0.86 (−1.67–−0.04)	−1.37 (−2.18–−0.55)	1.03 (0.22–1.85)	1.33 (0.52–2.15)
May 20–June 30	−0.4 (−1.36–0.57)	−1.32 (−2.29–−0.36)	1.15 (0.18–2.11)	0.51 (−0.45–1.48)
Mar 23–June 30	−0.66 (−1.28–−0.03)	−1.26 (−1.89–−0.64)	1.16 (0.53–1.78)	1.06 (0.44–1.69)
July 1–Dec 11	−1.21 (−1.7–−0.73)	−1.58 (−2.07–−1.09)	2.92 (2.43–3.41)	0.35 (−0.13–0.84)

Table S35. Difference in intra-annual 2020 BC concentrations ($\mu\text{g}/\text{m}^3$), as well as 95% confidence interval of each indicated time period at Near Road.

	Jan 1–Mar 22	Mar 23–Apr 10	Mar 23–May 1	Mar 23–May 20	May 20–June 30	Mar 23–June 30
Mar 23–Apr 10	−0.13 (−0.32–0.06)	-	-	-	-	-
Mar 23–May 1	0.06 (−0.08–0.21)	−0.19 (−0.4–0.02)	-	-	-	-
Mar 23–May 20	0.08 (−0.05–0.21)	−0.21 (−0.41–−0.01)	−0.01 (−0.17–0.14)	-	-	-
May 20–June 30	−0.08 (−0.22–0.07)	−0.05 (−0.26–0.15)	0.14 (−0.03–0.31)	0.15 (0.31–0)	-	-
Mar 23–June 30	0.01 (−0.1–0.12)	−0.14 (−0.33–0.05)	0.05 (−0.09–0.19)	0.07 (0.19–0.19)	−0.07 (−0.19–0.06)	-
July 1–Dec 11	−0.6 (−0.7–−0.49)	0.47 (0.28–0.65)	0.06 (−0.08–0.21)	0.67 (0.56–0.79)	0.52 (0.39–0.65)	0.61 (0.51–0.7)

Table S36. Difference in interannual BC concentrations ($\mu\text{g}/\text{m}^3$) 2016–2019 compared to 2020, as well as 95% confidence interval of each indicated time period at Near Road.

	2019	2018	2017	2016
Jan 1–Mar 22	−0.03 (−0.2–0.13)	−0.01 (−0.17–0.15)	−0.27 (−0.44–−0.11)	−0.59 (−0.76–−0.43)
Mar 23–Apr 10	−0.49 (−0.83–−0.15)	0.06 (−0.28–0.4)	−0.14 (−0.48–0.2)	0.02 (−0.32–0.35)
Mar 23–May 1	−0.41 (−0.65–−0.18)	−0.17 (−0.4–0.06)	−0.48 (−0.71–−0.24)	−0.89 (−1.13–−0.66)
Mar 23–May 20	0.03 (−0.17–0.22)	−0.28 (−0.48–−0.09)	−0.56 (−0.76–−0.37)	−1.08 (−1.27–−0.89)
May 20–June 30	0.2 (−0.03–0.43)	−0.11 (−0.33–0.12)	−0.34 (−0.57–−0.12)	−1.75 (−1.98–−1.52)
Mar 23–June 30	0.09 (−0.05–0.24)	−0.2 (−0.35–−0.06)	−0.47 (−0.62–−0.33)	−1.34 (−1.49–−1.2)
July 1–Dec 11	0.17 (0.05–0.28)	0.17 (0.05–0.28)	−0.22 (−0.33–−0.1)	−1.31 (−1.43–−1.2)

Table S37. Difference in intra-annual 2020 BC concentrations ($\mu\text{g}/\text{m}^3$), as well as 95% confidence interval of each indicated time period at Taft.

	Jan 1–Mar 22	Mar 23–Apr 10	Mar 23–May 1	Mar 23–May 20	May 20–June 30	Mar 23–June 30
Mar 23–Apr 10	−0.04 (−0.12–0.04)	-	-	-	-	-
Mar 23–May 1	0.09 (0.03–0.15)	−0.13 (−0.22–−0.04)	-	-	-	-
Mar 23–May 20	0.04 (−0.01–0.1)	−0.08 (−0.16–0.01)	0.05 (−0.02–0.12)	-	-	-
May 20–June 30	−0.15 (−0.21–−0.09)	0.11 (0.02–0.2)	0.24 (0.17–0.31)	0.19 (0.12–0.12)	-	-
Mar 23–June 30	−0.04 (−0.09–0.01)	0 (−0.08–0.08)	0.13 (0.07–0.19)	0.08 (0.03–0.13)	−0.08 (−0.13–−0.03)	-
July 1–Dec 11	−0.24 (−0.28–−0.19)	0.2 (0.12–0.28)	0.33 (0.27–0.38)	0.28 (0.23–0.33)	0.09 (0.03–0.14)	0.2 (0.15–0.24)

Table S38. Difference in interannual BC concentrations ($\mu\text{g}/\text{m}^3$) 2019 compared to 2020, as well as 95% confidence interval of each indicated time period at Taft.

	2019
Jan 1–Mar 22	0.03 (−0.02–0.08)
Mar 23–Apr 10	−0.08 (−0.18–0.03)
Mar 23–May 1	−0.12 (−0.19–0.04)
Mar 23–May 20	−0.08 (−0.14–0.02)
May 20–June 30	0.09 (0.02–0.16)
Mar 23–June 30	−0.01 (−0.06–0.03)
July 1–Dec 11	0.09 (0.05–0.12)

Table S39. Difference in intra-annual 2020 CO concentrations (ppm), as well as 95% confidence interval of each indicated time period at Near Road.

	Jan 1–Mar 22	Mar 23–Apr 10	Mar 23–May 1	Mar 23–May 20	May 20–June 30	Mar 23–June 30
Mar 23–Apr 10	0 (−0.04–0.04)	-	-	-	-	-
Mar 23–May 1	0.03 (0–0.05)	−0.03 (−0.07–0.01)	-	-	-	-
Mar 23–May 20	0.02 (0–0.05)	−0.02 (−0.06–0.01)	0 (−0.02–0.03)	-	-	-
May 20–June 30	0 (−0.02–0.03)	0 (−0.04–0.04)	0.02 (−0.01–0.06)	0.02 (−0.01–0.05)	-	-
Mar 23–June 30	0.01 (−0.01–0.03)	−0.01 (−0.05–0.02)	0.01 (−0.01–0.04)	0.01 (−0.01–0.03)	−0.01 (−0.03–0.01)	-
July 1–Dec 11	−0.11 (−0.13–−0.1)	0.11 (0.08–0.15)	0.14 (0.12–0.17)	0.14 (0.12–0.16)	0.12 (0.09–0.14)	0.13 (0.11–0.15)

Table S40. Difference in interannual CO concentrations (ppm) 2016–2019 compared to 2020, as well as 95% confidence interval of each indicated time period at Near Road.

	2019	2018	2017	2016
Jan 1–Mar 22	−0.09 (−0.11–−0.06)	−0.01 (−0.03–0.02)	−0.03 (−0.05–0)	−0.02 (−0.04–0.01)
Mar 23–Apr 10	−0.13 (−0.18–−0.08)	−0.04 (−0.09–0.01)	0 (−0.06–0.05)	0.04 (−0.01–0.09)
Mar 23–May 1	−0.09 (−0.13–−0.06)	−0.07 (−0.1–0.03)	−0.05 (−0.09–0.02)	−0.07 (−0.1–0.03)
Mar 23–May 20	−0.04 (−0.07–0.01)	−0.06 (−0.09–0.03)	−0.05 (−0.08–0.03)	−0.07 (−0.1–0.04)
May 20–June 30	0.04 (0–0.07)	−0.03 (−0.06–0.01)	0 (−0.04–0.03)	−0.07 (−0.11–0.04)
Mar 23–June 30	−0.01 (−0.03–0.01)	−0.04 (−0.07–0.02)	−0.03 (−0.05–0.01)	−0.07 (−0.09–0.05)
July 1–Dec 11	0.05 (0.03–0.06)	0.02 (0.01–0.04)	0.04 (0.03–0.06)	−0.01 (−0.02–0.01)

Table S41. Difference in intra-annual 2020 CO concentrations (ppm), as well as 95% confidence interval of each indicated time period at Taft.

	Jan 1–Mar 22	Mar 23–Apr 10	Mar 23–May 1	Mar 23–May 20	May 20–June 30	Mar 23–June 30
Mar 23–Apr 10	−0.01 (−0.03–0.01)	-	-	-	-	-
Mar 23–May 1	−0.01 (−0.02–0.01)	−0.01 (−0.03–0.01)	-	-	-	-
Mar 23–May 20	0 (−0.02–0.01)	−0.01 (−0.03–0.01)	0 (−0.02–0.01)	-	-	-
May 20–June 30	0.01 (0–0.03)	−0.03 (−0.05–−0.01)	−0.02 (−0.04–−0.01)	−0.02 (−0.03–0)	-	-
Mar 23–June 30	0 (−0.01–0.01)	−0.02 (−0.03–0)	−0.01 (−0.02–0)	−0.01 (0–−0.02)	0.01 (0.02–0)	-
July 1–Dec 11	−0.03 (−0.04–−0.02)	0.02 (0–0.04)	0.03 (0.01–0.04)	0.03 (0.02–0.04)	0.05 (0.04–0.06)	0.04 (0.03–0.05)

Table S42. Difference in interannual CO concentrations (ppb) 2016–2019 compared to 2020, as well as 95% confidence interval of each indicated time period at Taft.

	2019	2018	2017	2016
Jan 1–Mar 22	−0.02 (−0.03–0)	−0.02 (−0.03–−0.01)	0.03 (0.01–0.04)	−0.07 (−0.09–−0.06)
Mar 23–Apr 10	0.02 (−0.01–0.05)	0.05 (0.02–0.08)	0.08 (0.05–0.11)	0 (−0.03–0.03)
Mar 23–May 1	0.03 (0.01–0.05)	0.02 (0–0.04)	0.03 (0.01–0.05)	−0.04 (−0.06–−0.02)
Mar 23–May 20	0.03 (0.01–0.04)	0 (−0.01–0.02)	0.01 (0–0.03)	−0.04 (−0.06–−0.03)
May 20–June 30	0.03 (0.01–0.05)	−0.01 (−0.02–0.01)	−0.01 (−0.03–0.01)	−0.06 (−0.08–−0.04)
Mar 23–June 30	0.03 (0.02–0.04)	0 (−0.01–0.01)	0.01 (−0.01–0.02)	−0.05 (−0.06–−0.04)
July 1–Dec 11	0.04 (0.03–0.05)	0.06 (0.05–0.07)	0.01 (0–0.02)	0.04 (0.03–0.05)

Table S43. Difference in intra-annual 2020 NO_x concentrations (ppm), as well as 95% confidence interval of each indicated time period at Near Road.

	Jan 1–Mar 22	Mar 23–Apr 10	Mar 23–May 1	Mar 23–May 20	May 20–June 30	Mar 23–June 30
Mar 23–Apr 10	7.64 (1.91–4.13)	-	-	-	-	-
Mar 23–May 1	13.77 (2.05–3.75)	−6.13 (−1.08–1.31)	-	-	-	-
Mar 23–May 20	15.96 (2.24–3.76)	−8.32 (−1.11–1.16)	−2.2 (−0.98–0.79)	-	-	-
May 20–June 30	28.88 (2.47–4.17)	−21.24 (−1.49–0.9)	−15.12 (−1.38–0.55)	−12.92 (−1.2–0.56)	-	-
Mar 23–June 30	21.07 (2.42–3.76)	−13.43 (−1.15–1.01)	−7.3 (−0.99–0.62)	−5.1 (−0.8–0.62)	5.1 (−0.62–0.8)	-
July 1–Dec 11	−2.37 (0.08–1.3)	10.01 (1.29–3.37)	16.13 (1.45–2.97)	18.33 (1.65–2.96)	31.25 (1.86–3.39)	23.43 (1.85–2.95)

Table S44. Difference in interannual NO_x concentrations (ppm) 2016–2019 compared to 2020, as well as 95% confidence interval of each indicated time period at Near Road.

	2019	2018	2017	2016
Jan 1–Mar 22	1.3 (−3.63–6.23)	3.24 (−1.69–8.17)	0.47 (−4.46–5.4)	−10.6 (−15.53–−5.67)
Mar 23–Apr 10	−13.09 (−23.27–−2.91)	−9.77 (−19.95–0.41)	0.5 (−9.68–10.68)	5.42 (−4.76–15.6)
Mar 23–May 1	−3.41 (−10.43–3.61)	7.07 (0.06–14.09)	−7.31 (−14.32–−0.29)	−14.49 (−21.5–−7.47)
Mar 23–May 20	−5.12 (−10.9–0.66)	1.5 (−4.27–7.28)	−10.33 (−16.1–−4.55)	−19.75 (−25.52–−13.97)
May 20–June 30	−13.47 (−20.32–−6.62)	2.22 (−4.63–9.06)	−22.96 (−29.81–−16.11)	−32.84 (−39.69–−25.99)
Mar 23–June 30	−8.43 (−12.87–−4)	2.23 (−2.21–6.67)	−15.42 (−19.86–−10.98)	−24.64 (−29.07–−20.2)
July 1–Dec 11	7.64 (4.17–11.1)	3.38 (−0.08–6.85)	−6.51 (−9.98–−3.05)	−6.11 (−9.57–−2.64)

Table S45. Difference in intra-annual 2020 NO₂ concentrations (ppm), as well as 95% confidence interval of each indicated time period at Taft.

	Jan 1–Mar 22	Mar 23–Apr 10	Mar 23–May 1	Mar 23–May 20	May 20–June 30	Mar 23–June 30
Mar 23–Apr 10	2.9 (1.91–4.13)	-	-	-	-	-
Mar 23–May 1	3 (2.05–3.75)	0.02 (−1.08–1.31)	-	-	-	-
Mar 23–May 20	3.32 (2.24–3.76)	−0.3 (−1.11–1.16)	−0.41 (−0.98–0.79)	-	-	-
May 20–June 30	3.09 (2.47–4.17)	−0.07 (−1.49–0.9)	−0.19 (−1.38–0.55)	−0.09 (0.56–−1.2)	-	-
Mar 23–June 30	0.69 (2.42–3.76)	2.33 (−1.15–1.01)	2.21 (0.62–−0.99)	2.31 (−0.8–0.62)	2.63 (−0.62–0.8)	-
July 1–Dec 11	0 (0.08–1.3)	0 (1.29–3.37)	0 (1.45–2.97)	0 (1.65–2.96)	0 (1.86–3.39)	0 (1.85–2.95)

Table S46. Difference in interannual NO₂ concentrations (ppm) 2016–2019 compared to 2020, as well as 95% confidence interval of each indicated time period at Taft.

	2019	2018	2017	2016
Jan 1–Mar 22	−5.32 (−1.82–0.21)	−3.42 (−1.71–0.01)	1.99 (1.26–2.96)	0 (−1.26–0.34)
Mar 23–Apr 10	−2.75 (−6.91–3.72)	−2.74 (−5.01–1.82)	1.64 (0.39–3.58)	−1.13 (−1.61–1.61)
Mar 23–May 1	−2.56 (−3.85–1.65)	−2.61 (−3.84–1.64)	1.63 (0.54–2.74)	−1.42 (−2.24–0.02)
Mar 23–May 20	−1.86 (−3.46–1.65)	−1.91 (−3.52–1.7)	1.19 (0.72–2.54)	−2.79 (−2.33–0.5)
May 20–June 30	−2.26 (−2.95–0.77)	−2.3 (−3–0.83)	1.46 (0.1–2.28)	−1.95 (−3.88–1.7)
Mar 23–June 30	−0.92 (−2.96–1.56)	−0.14 (−3.01–1.6)	−0.03 (0.75–2.16)	−0.59 (−2.65–1.25)
July 1–Dec 11	0 (−1.47–0.38)	0 (−0.7–0.42)	0 (−0.59–0.52)	0 (−1.13–0.04)

Table S47. Difference in intra-annual 2020 O₃ concentrations (ppm), as well as 95% confidence interval of each indicated time period at Taft.

	Jan 1–Mar 22	Mar 23–Apr 10	Mar 23–May 1	Mar 23–May 20	May 20–June 30	Mar 23–June 30
Mar 23–Apr 10	−12.36 (−12.99–8.13)	-	-	-	-	-
Mar 23–May 1	−12.04 (−14.2–10.52)	1.48 (−0.86–4.46)	-	-	-	-
Mar 23–May 20	−14.23 (−13.68–10.41)	3.67 (−1.03–4)	1.87 (−2.27–1.64)	-	-	-
May 20–June 30	−12.98 (−16.05–12.42)	2.41 (1.03–6.31)	0.61 (−0.24–3.98)	0.93 (4.11–0.26)	-	-
Mar 23–June 30	−5.1 (−14.4–11.55)	−5.46 (0.03–4.8)	−7.26 (−1.17–2.4)	−6.94 (−0.64–2.5)	−9.13 (−2.5–0.64)	-
July 1–Dec 11	0 (−6.4–3.81)	0 (−7.77–3.15)	0 (−8.94–5.58)	0 (−8.39–5.5)	0 (−10.78–7.48)	0 (−9.08–6.66)

Table S48. Difference in interannual O₃ concentrations (ppm) 2016–2019 compared to 2020, as well as 95% confidence interval of each indicated time period at Taft.

	2019	2018	2017	2016
Jan 1–Mar 22	−3.93 (−6.23–2.77)	−1.26 (−7.73–4.27)	−6.04 (−6.43–2.97)	−1.92 (−5.18–1.72)
Mar 23–Apr 10	−3.18 (−7.5–0.37)	−3.31 (−4.82–2.31)	−3.87 (−9.61–2.48)	−1.57 (−5.48–1.65)
Mar 23–May 1	−2.12 (−5.64–0.72)	−4.16 (−5.77–0.86)	−4.6 (−6.32–1.41)	−1.06 (−4.02–0.89)
Mar 23–May 20	1.91 (−4.14–0.09)	−2.23 (−6.18–2.14)	−3.08 (−6.62–2.58)	−6.86 (−3.08–0.97)
May 20–June 30	−0.46 (−0.49–4.31)	−3.28 (−4.63–0.17)	−4.08 (−5.48–0.68)	−3.46 (−9.25–4.46)
Mar 23–June 30	−3.2 (−2.01–1.1)	1.47 (−4.84–1.73)	−1.65 (−5.63–2.52)	−0.66 (−5.01–1.9)
July 1–Dec 11	0 (−4.41–1.99)	0 (0.26–2.68)	0 (−2.86–0.43)	0 (−1.87–0.56)