

Supplemental Information for

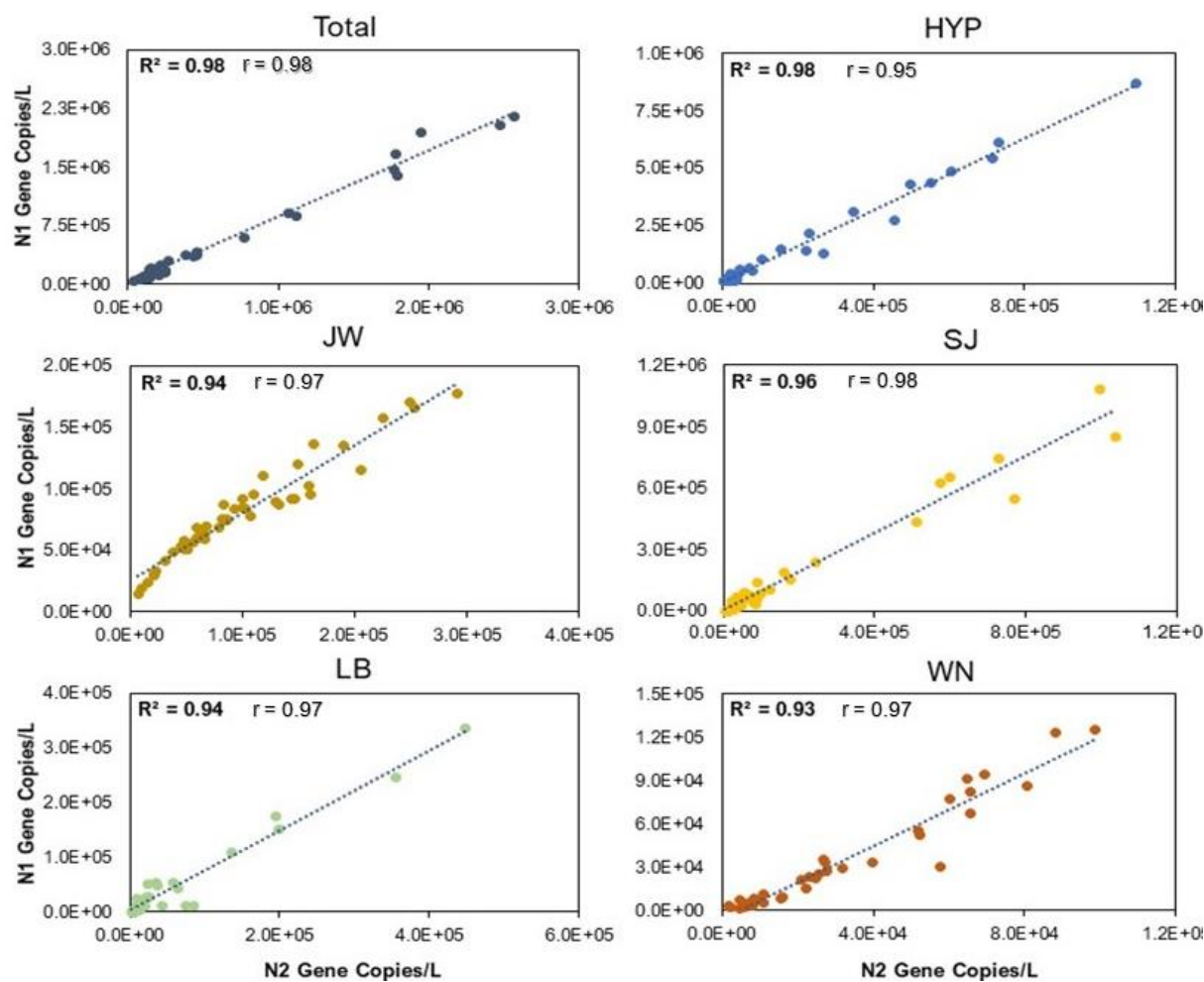
Long-Term Surveillance of Wastewater SARS-CoV-2 in Los Angeles County

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SI Figure 1: Comparison of measured N1 Copies/L versus N2 Copies/L over the duration of this study. Linear fit is represented by R^2 and the Pearson correlation between N1 and N2 Copies/L is represented by r .

SI Table 1: Primer and probe names, sequences, and final concentrations used in this study.

Primer/Oligo	Sequence	Final Concentration
2019- nCoV_N1-Fwd	5'-GAC CCC AAA ATC AGC GAA AT-3'	500 nM
2019- nCoV_N1-Rev	5'-TCTGGT TACTGCCAGTTGAATCTG-3'	500 nM
2019- nCoV_N1-P	5'-FAM-ACCCCGCATTACGTTTGGTGGACC- BHQ1-3'	125 nM
2019- nCoV_N2-Fwd	5'-TTACAAACATTGGCCGCAAA-3'	500 nM
2019- nCoV_N2-Rev	5'-GCGCGA CAT TCC GAA GAA-3'	500 nM
2019- nCoV_N2-P	5'-FAM-ACA ATT TGC CCC CAG CGC TTC AG- BHQ1-3'	125 nM
PMMV-Fwd	5'-GAGTGGTTTGACCTTAACGTTGA-3'	500 nM
PMMV-Fwd	5'-TTGTCGGTTGCAATGCAAGT-3'	500 nM
PMMV-P	5'-Quasar 670-CCTACCGAAGCAAATG-BHQ1-3'	125 nM
CC169-Fwd	5'-CATTCCGGATACTGCGATTTTAAGTG-3'	500 nM
NF002-Rev	5'-GCTTCCCCGACTTCTTTCGA-3'	500 nM
DS121-Org-560	5'-CAL Fluor Orange 560- CGCCCCAGAAGCAATTTTCGTGTAAG-3'	125 nM

Total

Date	Trials	Mean	Median	Mode	Standard	Variance	Skewness	Kurtosis	Coeff. of Variation	Minimum	Maximum	Range/Width	Mean Std. Error
5/19/2020	50000	35,939.57	29,626.09	7,565.86	24,477.31	599,130,680.44	2.49	15.96	0.6811	2,620.88	420,446.63	417,825.75	109.47
5/26/2020	50000	36,493.00	30,082.30	7,682.36	24,854.23	617,732,848.89	2.49	15.96	0.6811	2,661.24	426,921.03	424,259.79	111.15
6/9/2020	50000	39,012.74	32,159.40	8,212.81	26,570.35	705,983,431.61	2.49	15.96	0.6811	2,844.99	456,398.76	453,553.77	118.83
6/16/2020	50000	131,917.85	109,385.43	43,695.86	89,294.86	7,971,787,081.86	2.36	13.73	0.6768	7,429.90	1,317,517.51	1,310,087.61	399.29
6/23/2020	50000	95,919.91	79,069.72	20,192.68	65,328.03	4,267,751,807.47	2.49	15.96	0.6811	6,994.93	1,122,139.31	1,115,144.38	292.16
6/30/2020	50000	51,624.74	42,555.85	10,867.83	35,159.98	1,236,224,287.65	2.49	15.96	0.6811	3,764.72	603,942.83	600,178.12	157.24
7/7/2020	50000	71,238.78	58,724.30	14,986.90	48,518.49	2,354,043,550.37	2.49	15.96	0.6811	5,195.06	833,401.82	828,206.76	216.98
7/14/2020	50000	74,798.40	61,658.61	15,746.26	50,942.84	2,595,172,672.63	2.49	15.96	0.6811	5,454.65	875,044.88	869,590.23	227.82
7/21/2020	50000	61,171.00	61,171.00	15,621.73	50,539.97	2,554,288,872.59	2.49	15.96	0.6811	5,411.51	868,124.75	862,713.24	226.02
7/28/2020	50000	109,763.65	90,481.53	23,107.00	74,756.56	5,588,543,880.24	2.49	15.96	0.6811	8,004.48	1,284,093.12	1,276,088.64	334.32
8/4/2020	50000	86,857.31	71,599.14	18,284.85	59,155.78	3,499,405,880.24	2.49	15.96	0.6811	6,304.04	1,016,118.49	1,009,784.45	264.55
8/11/2020	50000	69,980.58	57,687.13	14,732.03	47,661.57	2,271,625,080.66	2.49	15.96	0.6811	5,103.31	818,682.54	813,579.23	213.15
8/18/2020	50000	52,825.07	43,545.32	11,120.52	35,977.49	1,455,559,814.57	2.49	15.96	0.6811	3,852.25	617,985.20	614,132.95	160.90
8/25/2020	50000	45,074.69	37,156.44	9,488.94	30,698.95	942,423,523.15	2.49	15.96	0.6811	3,287.06	527,315.72	524,028.66	137.29
9/1/2020	50000	34,992.97	28,845.78	7,366.58	23,832.61	567,993,272.94	2.49	15.96	0.6811	2,551.85	409,372.62	406,820.77	106.58
9/8/2020	50000	56,017.57	48,176.99	11,792.59	38,151.80	1,455,559,814.57	2.49	15.96	0.6811	4,085.06	655,333.29	651,248.22	170.62
9/15/2020	50000	60,678.93	50,019.50	12,773.88	41,326.51	1,707,880,232.67	2.49	15.96	0.6811	4,424.99	709,665.23	705,240.24	184.82
9/22/2020	50000	71,701.55	59,105.78	15,094.32	48,833.67	2,304,727,250.40	2.49	15.96	0.6811	5,228.81	838,615.71	833,586.90	216.39
9/29/2020	50000	79,745.93	65,737.01	16,787.79	54,312.44	2,949,840,907.11	2.49	15.96	0.6811	5,815.44	932,924.50	927,109.05	242.89
10/6/2020	50000	77,893.10	64,209.66	16,397.74	53,050.54	2,814,359,363.71	2.49	15.96	0.6811	5,680.33	911,248.81	905,568.48	237.25
10/13/2020	50000	84,197.29	69,406.40	17,724.88	57,344.12	3,288,348,136.65	2.49	15.96	0.6811	6,140.06	984,999.69	978,859.63	256.45
10/20/2020	50000	89,204.55	73,534.04	18,778.98	60,754.41	3,691,097,888.01	2.49	15.96	0.6811	6,505.21	1,043,578.16	1,037,072.95	271.70
10/27/2020	50000	73,894.46	60,913.47	15,555.97	50,327.19	2,532,826,227.89	2.49	15.96	0.6811	5,388.73	884,489.94	859,081.21	225.07
11/3/2020	50000	65,894.87	54,319.16	13,871.92	44,878.92	2,014,117,454.65	2.49	15.96	0.6811	4,805.36	770,885.00	766,079.64	200.70
11/10/2020	50000	94,651.63	78,024.23	19,925.68	64,464.24	4,155,638,338.13	2.49	15.96	0.6811	6,902.44	1,107,301.97	1,100,399.53	288.29
11/17/2020	50000	140,324.38	115,673.68	29,540.53	95,570.51	9,133,723,069.54	2.49	15.96	0.6811	10,233.11	1,641,614.27	1,631,381.16	427.40
12/1/2020	50000	153,143.66	126,241.01	32,239.19	104,301.32	10,878,766,223.79	2.49	15.96	0.6811	11,167.95	1,791,583.36	1,780,415.42	466.45
12/1/2020	50000	327,379.82	269,869.20	88,918.69	222,968.08	49,714,784,940.53	2.49	15.96	0.6811	23,874.06	3,829,921.69	3,806,047.63	997.14
12/1/2020	50000	402,205.90	331,550.63	84,670.77	273,929.77	75,037,519,618.53	2.49	15.96	0.6811	29,330.73	4,705,290.42	4,675,959.69	1,225.05
12/15/2020	50000	646,723.56	533,114.02	136,145.65	440,463.05	194,007,686,102.44	2.49	15.96	0.6811	47,162.09	7,565,831.74	7,518,669.64	1,969.81
12/29/2020	50000	933,480.39	789,496.44	196,512.55	635,764.09	404,196,977,772.77	2.49	15.96	0.6811	68,073.74	10,920,516.84	10,852,443.10	2,843.22
1/5/2021	50000	1,067,151.09	879,685.30	224,652.37	726,803.00	528,242,595,438.05	2.49	15.96	0.6811	77,821.63	12,484,291.72	12,406,470.09	3,250.36
1/12/2021	50000	869,456.62	716,719.69	183,034.52	592,159.52	350,652,827,162.05	2.49	15.96	0.6811	63,404.83	10,171,521.28	10,108,116.45	2,648.22
1/19/2021	50000	1,521,358.46	1,254,102.33	320,270.28	1,036,149.33	1,073,605,435,933.30	2.49	15.96	0.6811	110,944.55	17,979,932.29	17,686,987.74	4,633.80
1/26/2021	50000	1,102,157.52	842,116.78	215,058.19	695,763.59	484,086,974,679.98	2.49	15.96	0.6811	74,498.12	11,951,128.00	11,876,629.88	3,111.55
2/2/2021	50000	696,658.49	574,276.91	146,657.75	474,472.16	225,123,828,517.20	2.49	15.96	0.6811	50,803.58	8,150,006.03	8,099,202.45	2,121.90
2/16/2021	50000	489,916.50	403,853.16	103,135.26	333,666.70	111,333,666,956.62	2.49	15.96	0.6811	35,728.99	5,731,391.38	5,695,664.38	1,492.20
2/23/2021	50000	345,785.79	285,041.81	72,793.44	235,903.81	55,462,044,042.84	2.49	15.96	0.6811	25,216.31	4,045,247.84	4,020,031.53	1,053.21
3/2/2021	50000	227,367.26	187,425.79	47,864.44	154,852.68	23,979,351,564.40	2.49	15.96	0.6811	16,590.68	2,659,903.72	2,643,323.04	692.52
3/2/2021	50000	153,328.70	126,393.54	32,278.14	104,427.35	10,905,071,674.34	2.49	15.96	0.6811	11,181.44	1,793,748.13	1,782,566.69	467.01

SI Table 2: Raw data from the Monte Carlo Simulations for the compiled and individual sewersheds

San Jose Creek (SJ)

Date	Trails	Median	Standard Deviation	Variance	Skewness	Kurtosis	Coeff. of Variation	Minimum	Maximum	Mean Std. Error
5/19/2020	50000	1,299.78	1,069.85	1,144,570.08	2.42	14.69	0.6907	96.21	17,679.81	4.78
5/26/2020	50000	514.89	423.90	179,607.85	2.42	14.69	0.6907	38.11	7,003.56	1.90
6/9/2020	50000	309.77	254.97	65,009.79	2.42	14.69	0.6907	22.93	4,213.53	1.14
6/16/2020	50000	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
6/23/2020	50000	375.64	309.19	95,596.67	2.42	14.69	0.6907	27.80	5,109.49	1.38
6/30/2020	50000	2,649.49	2,180.79	4,755,823.66	2.42	14.69	0.6907	196.11	36,038.71	9.75
7/7/2020	50000	1,519.43	1,250.64	1,564,094.34	2.42	14.69	0.6907	112.47	20,667.50	5.59
7/14/2020	50000	3,893.41	3,204.65	10,269,752.41	2.42	14.69	0.6907	288.19	52,968.59	14.33
7/21/2020	50000	3,432.05	2,824.90	7,980,071.80	2.42	14.69	0.6907	254.04	46,683.11	12.63
7/28/2020	50000	3,299.31	2,715.64	7,374,710.10	2.42	14.69	0.6907	244.21	44,877.52	12.14
8/4/2020	50000	1,215.22	1,000.24	1,000,488.87	2.42	14.69	0.6907	89.95	16,529.61	4.47
8/11/2020	50000	675.70	553.08	305,902.54	2.48	17.10	0.6779	54.86	12,380.88	2.47
8/18/2020	50000	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
8/25/2020	50000	640.52	524.29	274,877.29	2.48	17.10	0.6779	52.00	11,736.25	2.34
9/1/2020	50000	275.40	226.68	51,385.71	2.42	14.69	0.6907	20.39	3,746.08	1.01
9/8/2020	50000	109.40	90.04	8,107.95	2.42	14.69	0.6907	8.10	1,488.03	0.40
9/15/2020	50000	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
9/22/2020	50000	4,451.95	3,664.38	13,427,683.16	2.42	14.69	0.6907	329.53	60,555.97	16.39
9/29/2020	50000	2,827.89	2,327.62	5,417,816.36	2.42	14.69	0.6907	209.32	38,465.25	10.41
10/6/2020	50000	1,659.38	1,365.83	1,865,478.98	2.42	14.69	0.6907	122.83	22,571.04	6.11
10/13/2020	50000	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
10/20/2020	50000	1,113.28	916.33	839,667.78	2.42	14.69	0.6907	82.40	15,142.94	4.10
10/27/2020	50000	481.58	396.38	157,118.82	2.42	14.69	0.6907	35.65	6,550.44	1.77
11/3/2020	50000	1,075.88	885.55	784,196.69	2.42	14.69	0.6907	79.64	14,634.20	3.96
11/10/2020	50000	2,199.97	1,810.78	3,278,922.63	2.42	14.69	0.6907	162.84	29,924.16	8.10
11/17/2020	50000	3,727.63	3,068.19	9,413,806.29	2.42	14.69	0.6907	275.92	50,703.63	13.72
11/24/2020	50000	8,721.46	7,178.59	51,532,162.18	2.42	14.69	0.6907	645.56	118,630.29	32.10
12/1/2020	50000	11,657.27	9,595.03	92,064,687.10	2.42	14.69	0.6907	862.86	158,563.40	42.91
12/8/2020	50000	27,984.55	23,033.93	530,562,021.49	2.42	14.69	0.6907	2,071.40	380,648.81	103.01
12/15/2020	50000	36,654.90	30,170.45	910,255,982.39	2.42	14.69	0.6907	2,713.18	498,583.81	134.93
12/22/2020	50000	51,670.77	42,529.94	1,808,795,484.04	2.42	14.69	0.6907	3,824.64	702,831.36	190.20
12/29/2020	50000	37,968.58	31,251.74	976,671,035.67	2.42	14.69	0.6907	2,810.41	516,452.70	139.76
1/5/2021	50000	46,376.75	38,172.46	1,457,136,492.58	2.42	14.69	0.6907	3,432.78	630,821.54	170.71
1/12/2021	50000	31,619.51	26,023.85	677,345,024.69	2.42	14.69	0.6907	2,340.46	430,092.01	116.39
1/19/2021	50000	24,241.56	19,953.10	398,126,065.56	2.42	14.69	0.6907	1,794.35	329,736.26	89.23
1/26/2021	50000	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
2/2/2021	50000	9,369.90	7,712.31	59,479,766.37	2.42	14.69	0.6907	693.55	127,450.35	34.49
2/9/2021	50000	6,309.83	5,193.59	26,973,378.00	2.42	14.69	0.6907	467.05	85,827.03	23.23
2/16/2021	50000	3,972.19	3,269.49	10,689,562.83	2.42	14.69	0.6907	294.02	54,030.17	14.62
2/23/2021	50000	3,039.75	2,502.00	6,260,004.03	2.42	14.69	0.6907	225.00	41,346.97	11.19
3/2/2021	50000	2,075.61	1,708.43	2,918,717.78	2.42	14.69	0.6907	153.64	28,232.70	7.64

Hyperion (HYP)

Date	Traffic	Mean	Median	Standard Deviation	Variance	Skewness	Kurtosis	Coeff. of Variation	Minimum	Maximum	Mean Std. Error
5/19/2020	50000	11,141.36	9,236.48	7,475.73	55,886,479.43	2.10	10.38	0.6710	786.23	79,030.59	33.43
5/26/2020	50000	12,147.54	10,070.63	8,150.86	66,436,538.83	2.10	10.38	0.6710	857.23	86,167.87	36.45
6/9/2020	50000	9,660.97	8,009.20	6,482.40	42,021,538.25	2.10	10.38	0.6710	681.76	68,529.54	28.99
6/16/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
6/23/2020	50000	68,612.08	56,881.20	46,037.93	2,119,490,924.93	2.10	10.38	0.6710	4,841.84	486,695.83	205.89
6/30/2020	50000	48,382.10	40,110.02	32,463.84	1,053,901,131.73	2.10	10.38	0.6710	3,414.25	343,195.65	145.18
7/7/2020	50000	46,077.41	38,199.37	30,917.42	955,886,784.81	2.10	10.38	0.6710	3,251.61	326,647.43	138.27
7/14/2020	50000	41,523.15	34,423.77	27,861.56	776,266,647.74	2.10	10.38	0.6710	2,930.22	294,542.05	124.60
7/21/2020	50000	33,603.95	27,858.55	22,547.87	508,406,277.48	2.10	10.38	0.6710	2,371.38	238,367.64	100.84
7/28/2020	50000	33,787.86	28,011.01	22,671.27	513,986,456.20	2.10	10.38	0.6710	2,384.35	239,672.21	101.39
8/4/2020	50000	29,790.61	24,697.19	19,989.16	399,566,570.34	2.10	10.38	0.6710	2,102.27	211,317.96	89.39
8/11/2020	50000	27,369.78	22,690.26	18,364.81	337,266,401.80	2.10	10.38	0.6710	1,931.44	194,145.97	82.13
8/18/2020	50000	20,925.59	17,347.86	14,040.84	197,145,094.83	2.10	10.38	0.6710	1,476.69	148,434.49	62.79
8/25/2020	50000	16,971.36	14,069.70	11,387.59	129,677,236.71	2.10	10.38	0.6710	1,197.64	120,385.37	50.93
9/1/2020	50000	12,799.47	10,611.09	8,588.30	73,758,865.25	2.10	10.38	0.6710	903.24	90,792.29	38.41
9/8/2020	50000	31,324.54	25,968.86	21,018.41	441,773,598.34	2.10	10.38	0.6710	2,210.52	222,198.81	94.00
9/15/2020	50000	30,949.55	25,657.98	20,766.80	431,259,811.04	2.10	10.38	0.6710	2,184.06	219,538.82	92.87
9/22/2020	50000	35,435.63	29,377.06	23,776.91	565,341,273.29	2.10	10.38	0.6710	2,500.63	251,360.59	106.33
9/29/2020	50000	37,632.62	31,198.42	25,251.06	637,615,983.07	2.10	10.38	0.6710	2,655.67	266,944.78	112.93
10/6/2020	50000	43,104.00	35,734.34	28,922.29	836,499,101.78	2.10	10.38	0.6710	3,041.78	305,755.71	129.34
10/13/2020	50000	40,443.42	33,528.65	27,137.08	736,421,076.16	2.10	10.38	0.6710	2,854.03	286,883.09	121.36
10/20/2020	50000	38,059.28	31,552.13	25,537.34	652,155,913.68	2.10	10.38	0.6710	2,685.78	269,971.28	114.21
10/27/2020	50000	29,258.89	24,256.38	19,632.39	385,430,560.80	2.10	10.38	0.6710	2,064.75	207,546.26	87.80
11/3/2020	50000	28,632.07	21,249.65	17,198.83	295,799,719.28	2.10	10.38	0.6710	1,808.81	181,819.61	76.92
11/10/2020	50000	49,624.29	41,139.83	33,297.33	1,108,712,460.38	2.10	10.38	0.6710	3,501.90	352,007.00	148.91
11/17/2020	50000	74,125.12	61,451.66	49,737.12	2,473,780,926.75	2.10	10.38	0.6710	5,230.89	525,802.27	222.43
11/24/2020	50000	96,999.14	80,414.81	65,085.32	4,236,099,035.45	2.10	10.38	0.6710	6,845.07	688,057.95	291.07
12/1/2020	50000	260,472.99	215,938.89	174,774.42	30,546,098,518.03	2.10	10.38	0.6710	18,381.15	1,847,650.04	781.61
12/8/2020	50000	310,290.01	257,238.50	208,201.08	43,347,690,145.59	2.10	10.38	0.6710	21,896.66	2,201,024.22	931.10
12/15/2020	50000	525,574.04	435,714.57	352,654.22	124,365,001,344.39	2.10	10.38	0.6710	37,088.90	3,728,128.99	1,577.12
12/22/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
12/29/2020	50000	772,270.84	640,232.64	518,184.98	268,515,676,008.47	2.10	10.38	0.6710	54,497.89	5,478,058.47	2,317.39
1/5/2021	50000	931,247.74	772,028.63	624,856.68	390,445,674,270.45	2.10	10.38	0.6710	65,716.63	6,605,751.32	2,794.44
1/12/2021	50000	734,689.93	609,077.08	492,868.62	243,018,055,486.16	2.10	10.38	0.6710	51,845.87	5,211,480.43	2,204.62
1/19/2021	50000	1,406,498.97	1,166,024.28	943,744.87	890,654,383,385.07	2.10	10.38	0.6710	99,254.34	9,976,918.98	4,220.56
1/26/2021	50000	959,858.12	795,747.38	644,053.92	414,805,450,946.86	2.10	10.38	0.6710	67,735.62	6,808,697.95	2,880.30
2/2/2021	50000	644,482.16	534,292.49	432,440.22	187,004,546,989.56	2.10	10.38	0.6710	45,480.05	4,571,596.84	1,933.93
2/9/2021	50000	461,086.81	382,252.97	309,384.03	95,718,474,981.47	2.10	10.38	0.6710	32,538.14	3,270,692.58	1,383.61
2/16/2021	50000	328,609.38	272,425.73	220,493.17	48,617,237,206.68	2.10	10.38	0.6710	23,189.43	2,330,971.58	986.08
2/23/2021	50000	212,637.96	176,282.41	142,677.66	20,356,915,988.16	2.10	10.38	0.6710	15,005.51	1,508,335.08	638.07
3/2/2021	50000	144,319.75	119,644.83	96,836.91	9,377,387,985.80	2.10	10.38	0.6710	10,184.41	1,023,723.76	433.07

Joint Water (JW)

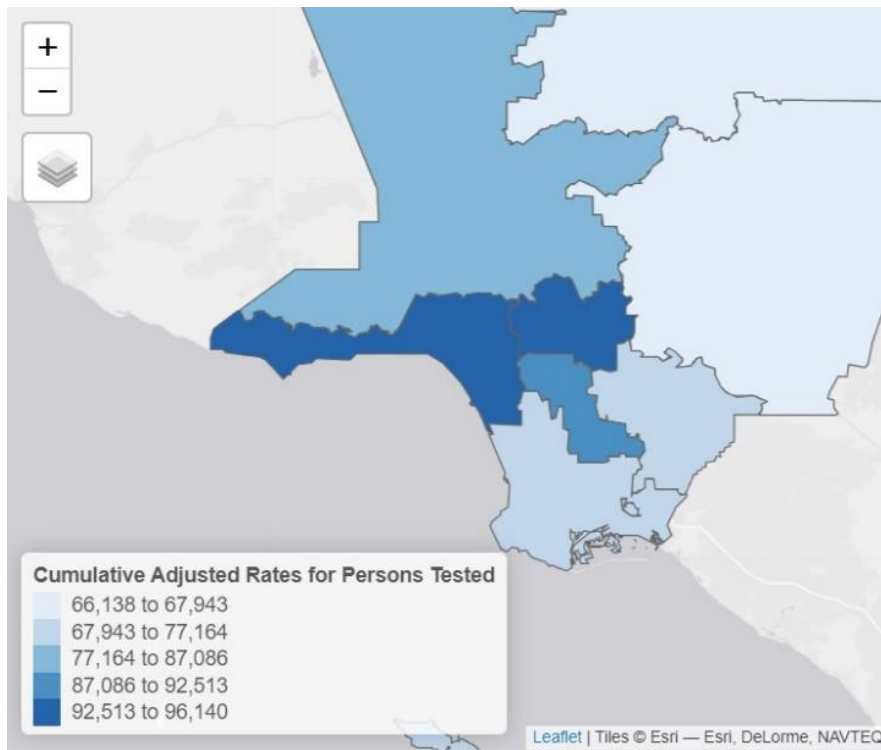
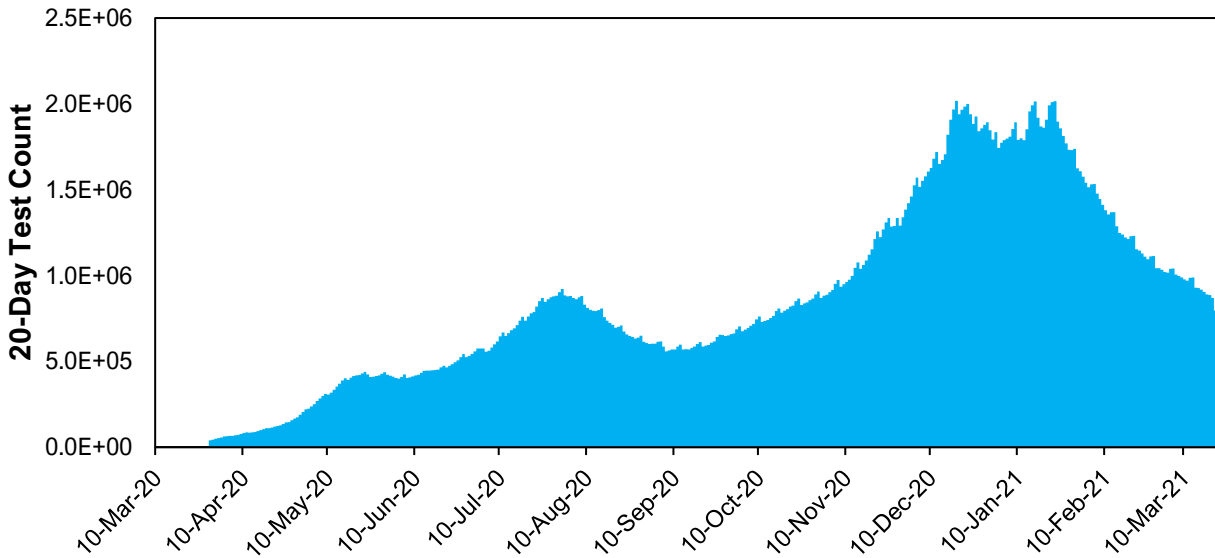
Date	Trials	Mean	Median	Standard Deviation	Variance	Skewness	Kurtosis	Coeff. of Variation	Minimum	Maximum	Mean Std. Err.
5/19/2020	50000	23,386.69	19,421.31	15,821.00	250,304,041.43	2.89	37.37	0.6765	1,747.86	559,839.92	70.75
5/26/2020	50000	23,842.79	19,775.17	16,109.26	259,508,144.89	2.89	37.37	0.6765	1,779.71	570,040.13	72.04
6/9/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
6/16/2020	50000	27,087.57	22,494.68	18,324.63	335,791,955.75	2.89	37.37	0.6765	2,024.46	648,432.95	81.95
6/23/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
6/30/2020	50000	23,426.53	19,454.40	15,847.95	251,157,535.05	2.89	37.37	0.6765	1,750.84	580,793.58	70.87
7/7/2020	50000	28,756.29	23,880.46	19,453.51	378,439,210.27	2.89	37.37	0.6765	2,149.17	688,379.60	87.00
7/14/2020	50000	36,632.79	30,421.44	24,781.93	614,144,013.04	2.89	37.37	0.6765	2,737.84	876,930.23	110.83
7/21/2020	50000	72,005.96	59,796.85	48,711.74	2,372,833,589.41	2.89	37.37	0.6765	5,381.54	1,723,707.50	217.85
7/28/2020	50000	55,654.74	46,218.09	37,650.20	1,417,537,722.98	2.89	37.37	0.6765	4,159.49	1,332,285.32	168.38
8/4/2020	50000	41,915.33	34,808.29	28,355.55	804,037,172.26	2.89	37.37	0.6765	3,132.65	1,003,385.90	126.81
8/11/2020	50000	32,132.16	26,683.93	21,737.27	472,509,093.95	2.89	37.37	0.6765	2,401.48	769,192.46	97.21
8/18/2020	50000	27,369.19	22,728.55	18,515.15	342,810,598.62	2.89	37.37	0.6765	2,045.50	655,174.60	82.80
8/25/2020	50000	22,015.02	18,282.22	14,893.07	221,803,628.53	2.89	37.37	0.6765	1,645.35	527,004.42	66.60
9/1/2020	50000	24,807.47	20,601.19	16,782.15	281,640,694.75	2.89	37.37	0.6765	1,854.05	593,851.19	75.05
9/8/2020	50000	29,996.53	24,910.41	20,292.53	411,786,826.09	2.89	37.37	0.6765	2,241.87	718,068.96	90.75
9/15/2020	50000	30,931.07	25,686.49	20,924.74	437,844,832.38	2.89	37.37	0.6765	2,311.71	740,440.29	93.58
9/22/2020	50000	38,808.70	32,228.42	26,253.93	689,268,794.74	2.89	37.37	0.6765	2,900.46	929,018.24	117.41
9/29/2020	50000	31,960.86	26,541.67	21,621.39	467,484,554.10	2.89	37.37	0.6765	2,388.67	765,091.83	96.69
10/6/2020	50000	42,766.92	35,515.49	28,931.65	837,040,208.18	2.89	37.37	0.6765	3,196.29	1,023,771.63	129.39
10/13/2020	50000	49,593.38	41,184.48	33,549.72	1,125,583,664.05	2.89	37.37	0.6765	3,706.48	1,187,186.15	150.04
10/20/2020	50000	43,320.93	35,975.57	29,306.43	858,867,088.06	2.89	37.37	0.6765	3,237.70	1,037,033.80	131.06
10/27/2020	50000	38,441.57	31,923.54	26,005.57	676,289,415.76	2.89	37.37	0.6765	2,873.03	920,229.66	116.30
11/3/2020	50000	42,398.64	35,209.65	28,682.50	822,686,032.11	2.89	37.37	0.6765	3,168.77	1,014,955.48	128.27
11/10/2020	50000	61,449.08	51,029.97	41,570.05	1,728,069,395.40	2.89	37.37	0.6765	4,592.55	1,470,992.70	185.91
11/17/2020	50000	45,194.83	37,531.74	30,574.12	934,776,809.74	2.89	37.37	0.6765	3,377.75	1,081,891.97	136.73
11/24/2020	50000	53,107.42	44,102.69	35,926.95	1,290,745,950.60	2.89	37.37	0.6765	3,969.11	1,271,306.64	160.67
12/1/2020	50000	59,153.31	49,123.46	40,016.97	1,601,358,266.71	2.89	37.37	0.6765	4,420.97	1,416,035.64	178.96
12/8/2020	50000	77,097.57	64,025.14	52,156.19	2,720,268,358.56	2.89	37.37	0.6765	5,762.08	1,845,592.45	233.25
12/15/2020	50000	104,675.25	86,926.83	70,812.38	5,014,392,660.98	2.89	37.37	0.6765	7,823.16	2,505,757.85	316.68
12/22/2020	50000	108,792.82	90,346.24	73,597.90	5,416,650,668.38	2.89	37.37	0.6765	8,130.90	2,604,325.99	329.14
12/29/2020	50000	29,113.48	24,177.09	19,695.15	387,898,935.75	2.89	37.37	0.6765	2,175.87	696,930.10	88.08
1/5/2021	50000	73,125.29	60,726.39	49,468.96	2,447,177,747.96	2.89	37.37	0.6765	5,465.20	1,750,502.31	221.23
1/12/2021	50000	94,814.28	78,737.86	64,141.47	4,114,128,164.33	2.89	37.37	0.6765	7,086.18	2,266,701.99	286.85
1/19/2021	50000	86,858.10	72,130.71	58,759.15	3,452,637,797.02	2.89	37.37	0.6765	6,491.56	2,079,243.92	262.78
1/26/2021	50000	62,000.20	51,487.64	41,942.88	1,759,205,464.60	2.89	37.37	0.6765	4,633.74	1,484,185.60	187.57
2/2/2021	50000	41,703.00	34,631.96	28,211.91	795,911,627.02	2.89	37.37	0.6765	3,116.78	998,302.95	126.17
2/9/2021	50000	21,460.71	17,821.90	14,518.08	210,774,788.73	2.89	37.37	0.6765	1,603.92	513,735.13	64.93
2/16/2021	50000	12,330.80	10,240.03	8,341.74	69,584,566.71	2.89	37.37	0.6765	921.57	295,179.64	37.31
2/23/2021	50000	10,835.75	8,998.48	7,330.34	53,733,925.01	2.89	37.37	0.6765	809.84	259,390.59	32.78
3/2/2021	50000	6,217.66	5,163.41	4,206.22	17,692,313.65	2.89	37.37	0.6765	464.69	148,840.89	18.81

Long Beach (LB)

Date	Trials	Mean	Median	Standard Deviation	Variance	Skewness	Kurtosis	Coeff. of Variation	Minimum	Maximum	Mean Std. Error
5/19/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
5/26/2020	50000	44.63	37.18	29.97	898.07	2.27	12.63	0.6715	2.44	426.09	0.13
6/9/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
6/16/2020	50000	64.46	53.70	43.28	1,873.16	2.27	12.63	0.6715	3.53	615.37	0.19
6/23/2020	50000	96.12	80.08	64.54	4,165.34	2.27	12.63	0.6715	5.26	917.65	0.29
6/30/2020	50000	102.12	85.08	68.57	4,702.13	2.27	12.63	0.6715	5.59	974.98	0.31
7/7/2020	50000	52.05	43.37	34.95	1,221.67	2.27	12.63	0.6715	2.85	496.97	0.16
7/14/2020	50000	68.65	57.20	46.10	2,124.91	2.27	12.63	0.6715	3.76	655.42	0.21
7/21/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
7/28/2020	50000	38.72	32.26	26.00	675.80	2.27	12.63	0.6715	2.12	369.62	0.12
8/4/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
8/11/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
8/18/2020	50000	35.03	29.19	23.52	553.39	2.27	12.63	0.6715	1.92	334.48	0.11
8/25/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
9/1/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
9/8/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
9/15/2020	50000	186.19	155.12	126.02	15,629.30	2.27	12.63	0.6715	10.19	1,777.54	0.56
9/22/2020	50000	240.05	199.99	161.18	25,979.17	2.27	12.63	0.6715	13.14	2,291.72	0.72
9/29/2020	50000	1,100.87	917.17	739.18	546,386.36	2.27	12.63	0.6715	60.25	10,509.93	3.31
10/6/2020	50000	1,306.40	1,088.41	877.18	769,451.19	2.27	12.63	0.6715	71.49	12,472.12	3.92
10/13/2020	50000	405.81	338.10	272.48	74,247.97	2.27	12.63	0.6715	22.21	3,874.29	1.22
10/20/2020	50000	700.22	583.38	470.16	221,052.01	2.27	12.63	0.6715	38.32	6,664.93	2.10
10/27/2020	50000	480.33	400.18	322.52	104,016.94	2.27	12.63	0.6715	26.29	4,585.66	1.44
11/3/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
11/10/2020	50000	447.37	372.72	300.39	90,233.16	2.27	12.63	0.6715	24.48	4,271.03	1.34
11/17/2020	50000	613.61	511.22	412.01	169,751.77	2.27	12.63	0.6715	33.58	5,958.10	1.84
11/24/2020	50000	676.33	563.47	454.12	206,226.01	2.27	12.63	0.6715	37.01	6,456.86	2.03
12/1/2020	50000	359.53	299.54	241.41	58,277.16	2.27	12.63	0.6715	19.68	3,432.41	1.08
12/8/2020	50000	1,406.56	1,171.86	944.44	891,967.76	2.27	12.63	0.6715	76.98	13,428.40	4.22
12/15/2020	50000	1,402.93	1,168.83	942.00	887,368.00	2.27	12.63	0.6715	76.78	13,393.73	4.21
12/22/2020	50000	8,922.37	7,433.56	5,990.95	35,891,510.07	2.27	12.63	0.6715	488.29	85,181.57	26.79
12/29/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
1/5/2021	50000	10,147.49	8,454.25	6,813.56	46,424,580.93	2.27	12.63	0.6715	555.34	96,877.69	30.47
1/12/2021	50000	4,583.78	3,818.92	3,077.79	9,472,814.35	2.27	12.63	0.6715	250.85	43,761.21	13.76
1/19/2021	50000	4,368.01	3,639.15	2,932.91	8,601,983.82	2.27	12.63	0.6715	239.05	41,701.25	13.12
1/26/2021	50000	2,938.31	2,448.01	1,972.93	3,892,469.98	2.27	12.63	0.6715	160.80	28,051.91	8.82
2/2/2021	50000	1,081.53	901.07	726.20	527,364.58	2.27	12.63	0.6715	59.19	10,325.36	3.25
2/9/2021	50000	1,106.92	922.22	743.24	552,411.59	2.27	12.63	0.6715	60.58	10,567.72	3.32
2/16/2021	50000	997.97	831.45	670.09	449,020.51	2.27	12.63	0.6715	54.62	9,527.59	3.00
2/23/2021	50000	445.41	371.09	299.07	89,443.43	2.27	12.63	0.6715	24.38	4,252.30	1.34
3/2/2021	50000	308.70	257.19	207.28	42,964.44	2.27	12.63	0.6715	16.89	2,947.16	0.93

Whittier Narrows (WN)

Date	Trials	Mean	Median	Standard Deviation	Variance	Skewness	Kurtosis	Coeff. of Variation	Minimum	Maximum	Mean Std. Error
5/19/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
5/26/2020	50000	26.89	22.33	18.11	327.85	2.28	13.37	0.6735	1.38	343.19	0.08
6/9/2020	50000	36.07	29.96	24.29	590.12	2.28	13.37	0.6735	1.85	460.44	0.11
6/16/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
6/23/2020	50000	123.91	102.92	83.45	6,963.63	2.28	13.37	0.6735	6.37	1,581.68	0.37
6/30/2020	50000	173.12	143.79	116.59	13,592.75	2.28	13.37	0.6735	8.89	2,209.81	0.52
7/7/2020	50000	110.84	92.06	74.65	5,572.01	2.28	13.37	0.6735	5.69	1,414.84	0.33
7/14/2020	50000	93.58	77.72	63.02	3,971.29	2.28	13.37	0.6735	4.81	1,194.45	0.28
7/21/2020	50000	82.92	68.88	55.85	3,118.74	2.28	13.37	0.6735	4.26	1,058.50	0.25
7/28/2020	50000	468.22	388.91	315.33	99,430.44	2.28	13.37	0.6735	24.05	5,976.69	1.41
8/4/2020	50000	287.92	239.15	193.90	37,597.71	2.28	13.37	0.6735	14.79	3,675.21	0.87
8/11/2020	50000	185.47	154.05	124.91	15,601.34	2.28	13.37	0.6735	9.53	2,367.46	0.56
8/18/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
8/25/2020	50000	122.03	101.36	82.18	6,753.52	2.28	13.37	0.6735	6.27	1,557.64	0.37
9/1/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
9/8/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
9/15/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
9/22/2020	50000	87.07	72.32	58.64	3,438.66	2.28	13.37	0.6735	4.47	1,111.46	0.26
9/29/2020	50000	0.00	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00
10/6/2020	50000	65.19	54.15	43.91	1,927.70	2.28	13.37	0.6735	3.35	832.19	0.20
10/13/2020	50000	50.30	41.78	33.87	1,147.27	2.28	13.37	0.6735	2.58	642.00	0.15
10/20/2020	50000	193.89	161.04	130.57	17,049.51	2.28	13.37	0.6735	9.96	2,474.90	0.58
10/27/2020	50000	357.48	296.93	240.75	57,958.79	2.28	13.37	0.6735	18.36	4,563.15	1.08
11/3/2020	50000	331.12	275.02	222.99	49,724.79	2.28	13.37	0.6735	17.01	4,226.57	1.00
11/10/2020	50000	387.98	322.26	261.29	68,270.46	2.28	13.37	0.6735	19.93	4,952.42	1.17
11/17/2020	50000	417.67	346.91	281.28	79,118.16	2.28	13.37	0.6735	21.46	5,331.37	1.26
11/24/2020	50000	475.35	394.83	320.13	102,480.88	2.28	13.37	0.6735	24.42	6,067.68	1.43
12/1/2020	50000	482.15	400.47	324.70	105,432.99	2.28	13.37	0.6735	24.77	6,154.45	1.45
12/8/2020	50000	371.49	308.56	250.18	62,591.67	2.28	13.37	0.6735	19.08	4,741.98	1.12
12/15/2020	50000	1,215.21	1,009.35	818.39	669,755.48	2.28	13.37	0.6735	62.43	15,511.69	3.66
12/22/2020	50000	1,663.83	1,381.97	1,120.50	1,255,529.75	2.28	13.37	0.6735	85.47	21,238.05	5.01
12/29/2020	50000	1,732.27	1,438.82	1,166.60	1,360,949.93	2.28	13.37	0.6735	88.99	22,111.70	5.22
1/5/2021	50000	36.07	29.96	24.29	590.12	2.28	13.37	0.6735	1.85	460.44	0.11
1/12/2021	50000	1,299.33	1,079.22	875.03	765,679.85	2.28	13.37	0.6735	66.75	16,585.35	3.91
1/19/2021	50000	996.91	828.03	671.37	450,736.19	2.28	13.37	0.6735	51.21	12,725.13	3.00
1/26/2021	50000	1,036.74	861.11	698.19	487,473.07	2.28	13.37	0.6735	53.26	13,233.55	3.12
2/2/2021	50000	1,266.35	1,051.83	852.82	727,308.28	2.28	13.37	0.6735	65.05	16,164.43	3.81
2/9/2021	50000	1,134.98	942.71	784.35	584,230.88	2.28	13.37	0.6735	58.31	14,487.50	3.42
2/16/2021	50000	792.65	658.37	533.81	284,954.65	2.28	13.37	0.6735	40.72	10,117.87	2.39
2/23/2021	50000	568.42	472.13	382.80	146,538.52	2.28	13.37	0.6735	29.20	7,255.66	1.71
3/2/2021	50000	775.04	643.75	521.95	272,432.45	2.28	13.37	0.6735	39.81	9,893.06	2.33
	50000	648.78	538.88	436.92	190,901.21	2.28	13.37	0.6735	33.33	8,281.43	1.95



SI Figure 2A-B: 2A) Time series analysis of the moving 20-day Covid-19 tests given in Los Angeles County. 2B) Heat map of the cumulative adjusted rate for persons tested in Los

Angeles County. Adjusted rates are per 100,000 people. Data grouped by service planning area. Image taken from the LA County COVID-19 Surveillance Dashboard

http://dashboard.publichealth.lacounty.gov/covid19_surveillance_dashboard/ on Oct 11, 2021.