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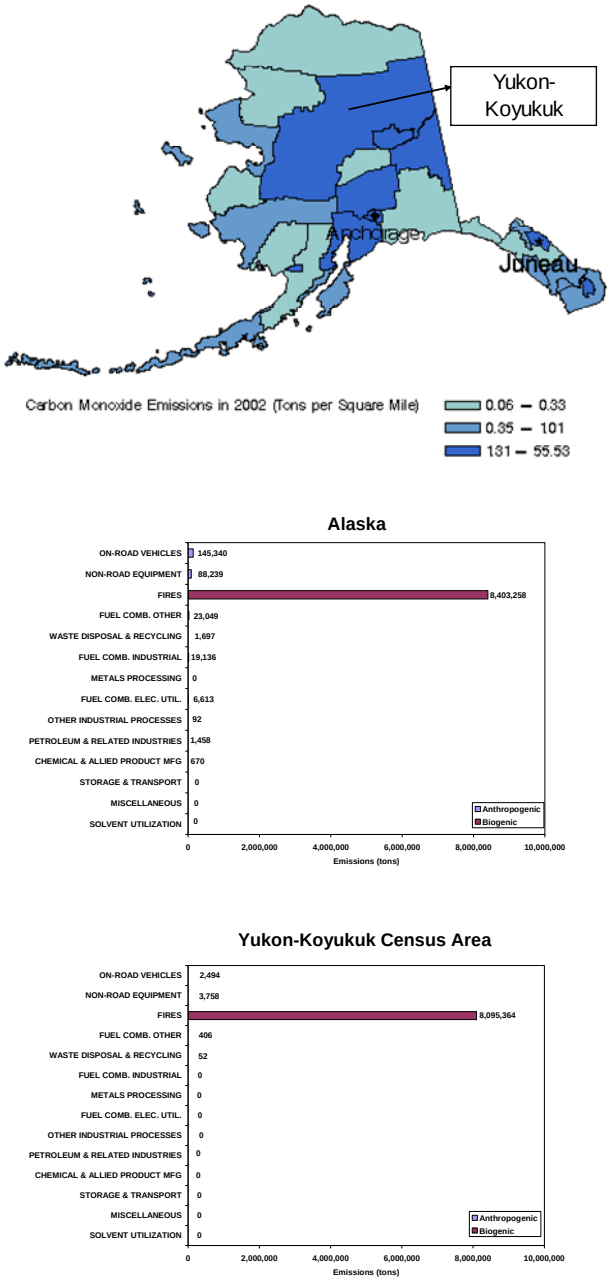


Figure A-1. CO emissions density map and distribution for the state of Alaska and for Yukon-Koyukuk County in Alaska.

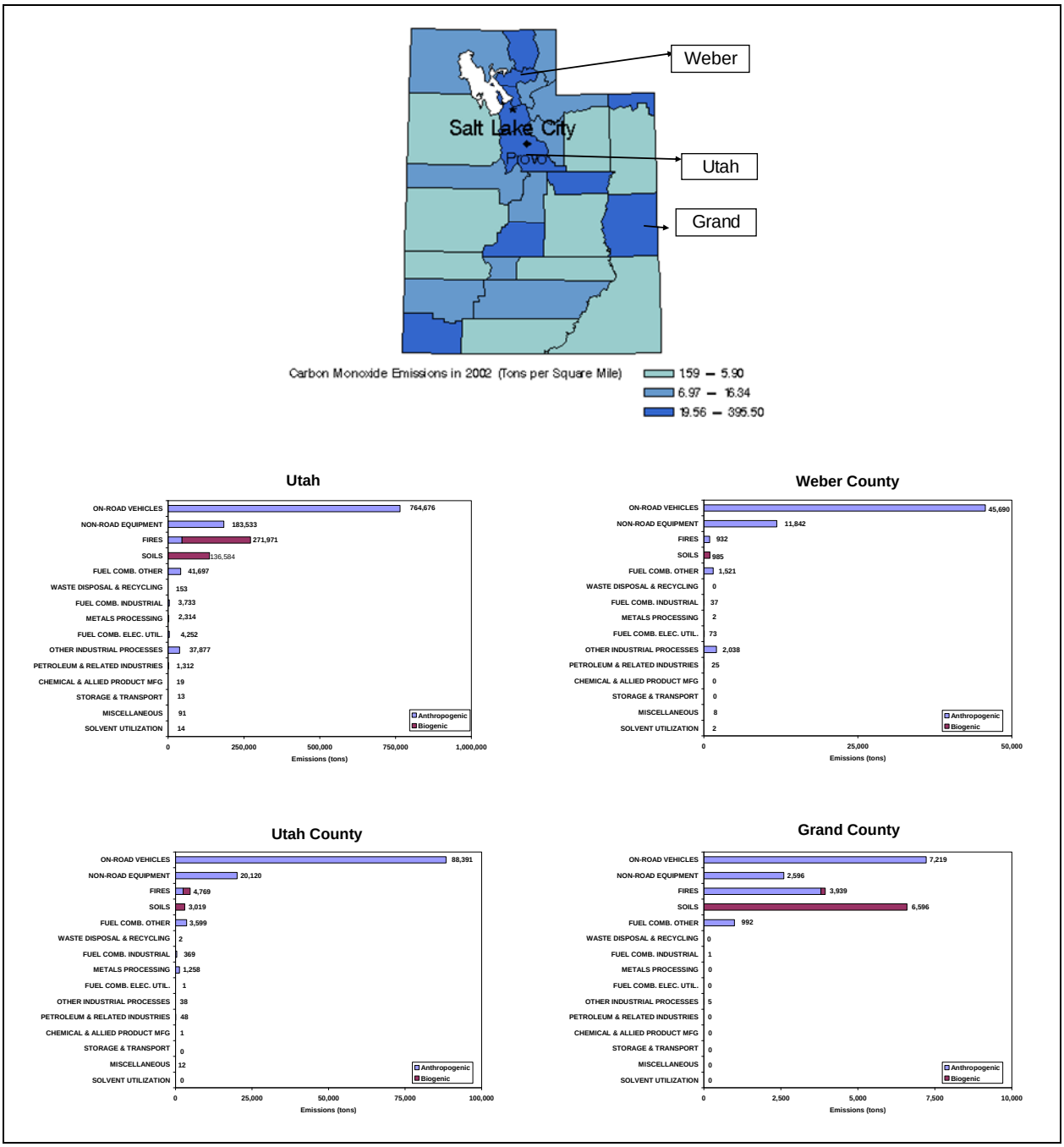


Figure A-2. CO emissions density map and distribution for the state of Utah and for selected counties in Utah.

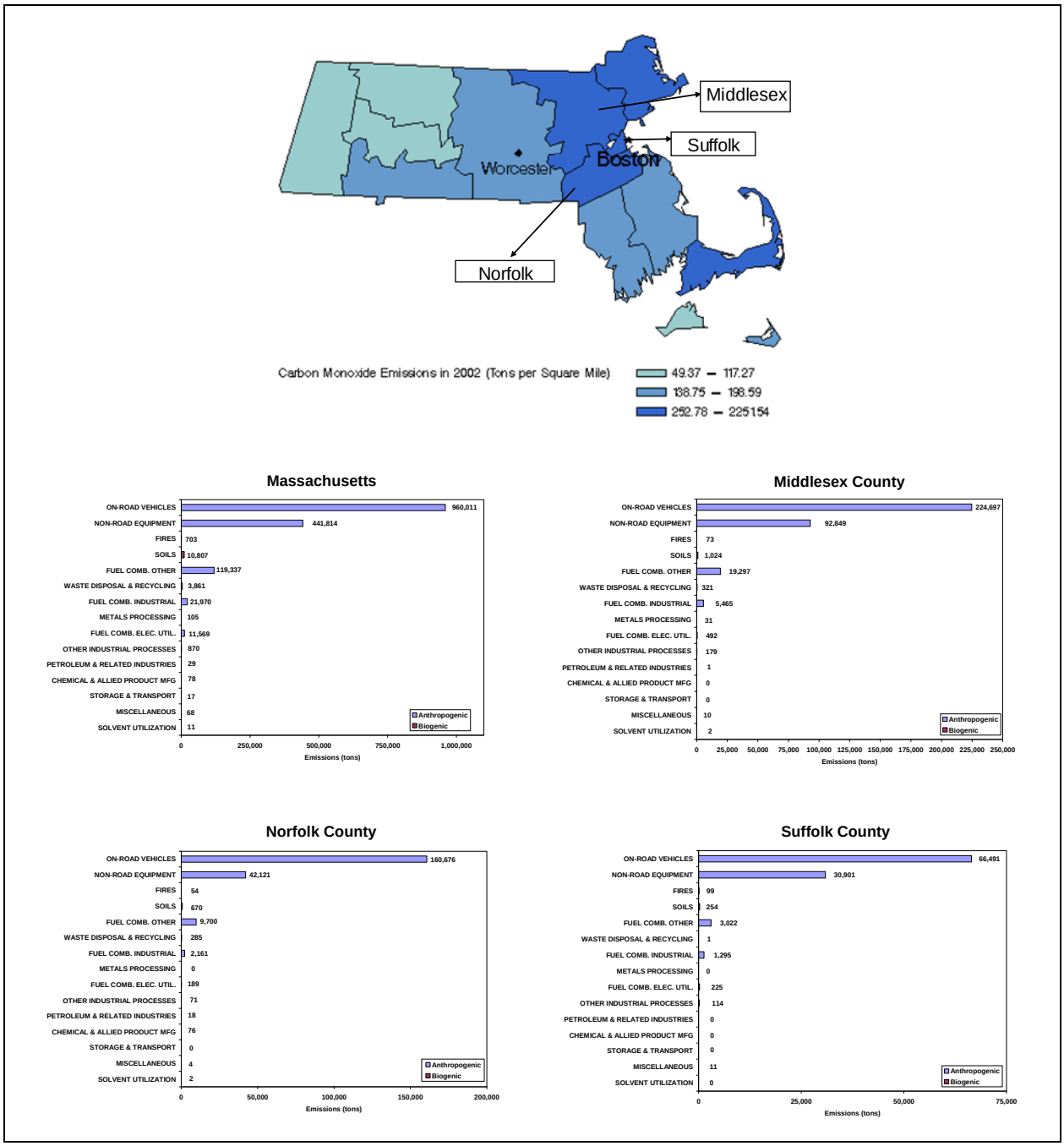


Figure A-3. CO emissions density map and distribution for the state of Massachusetts and for selected counties in Massachusetts.

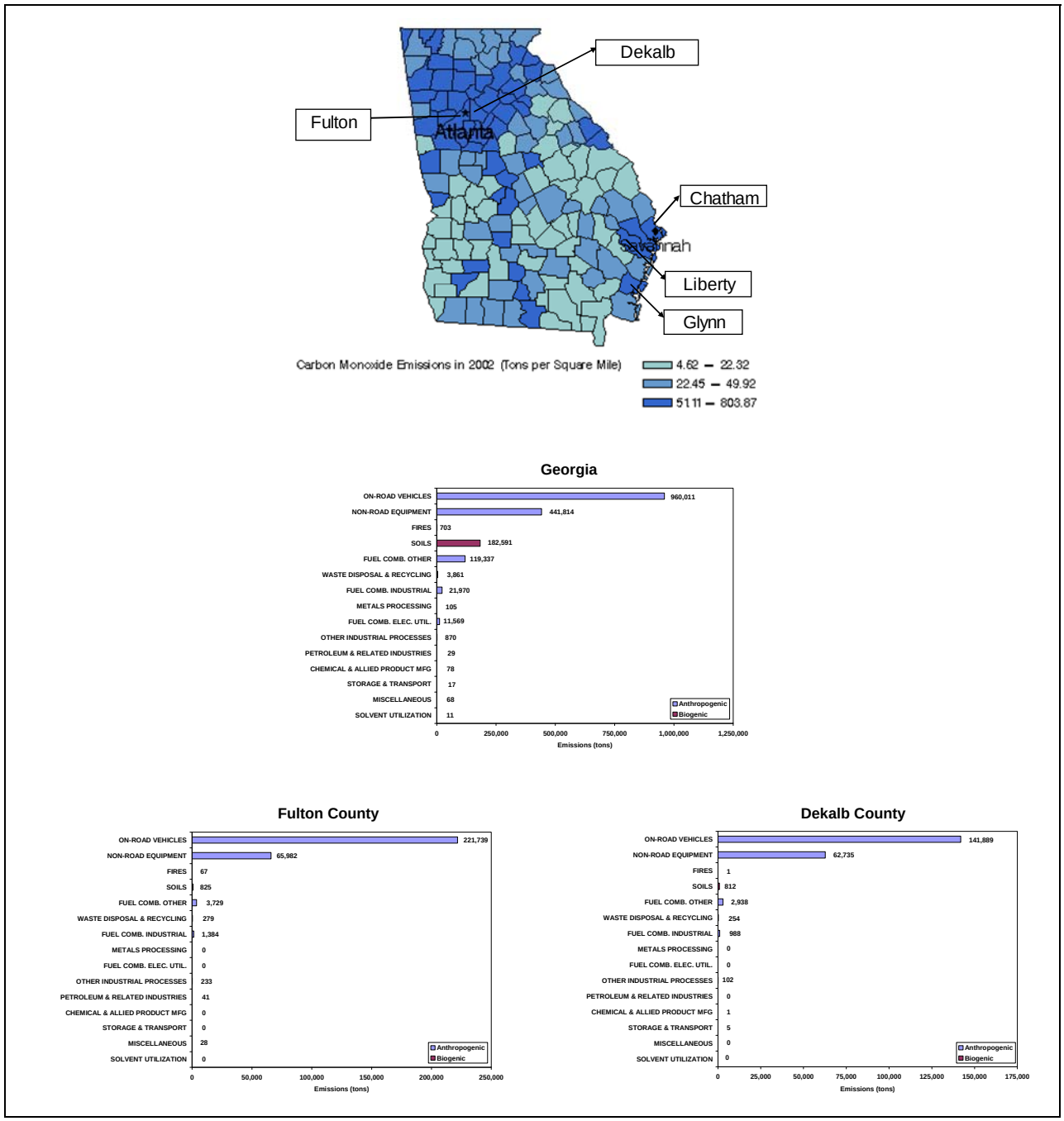


Figure A-4. CO emissions density map and distribution for the state of Georgia and for selected counties in Georgia (Figure 1 of 2).

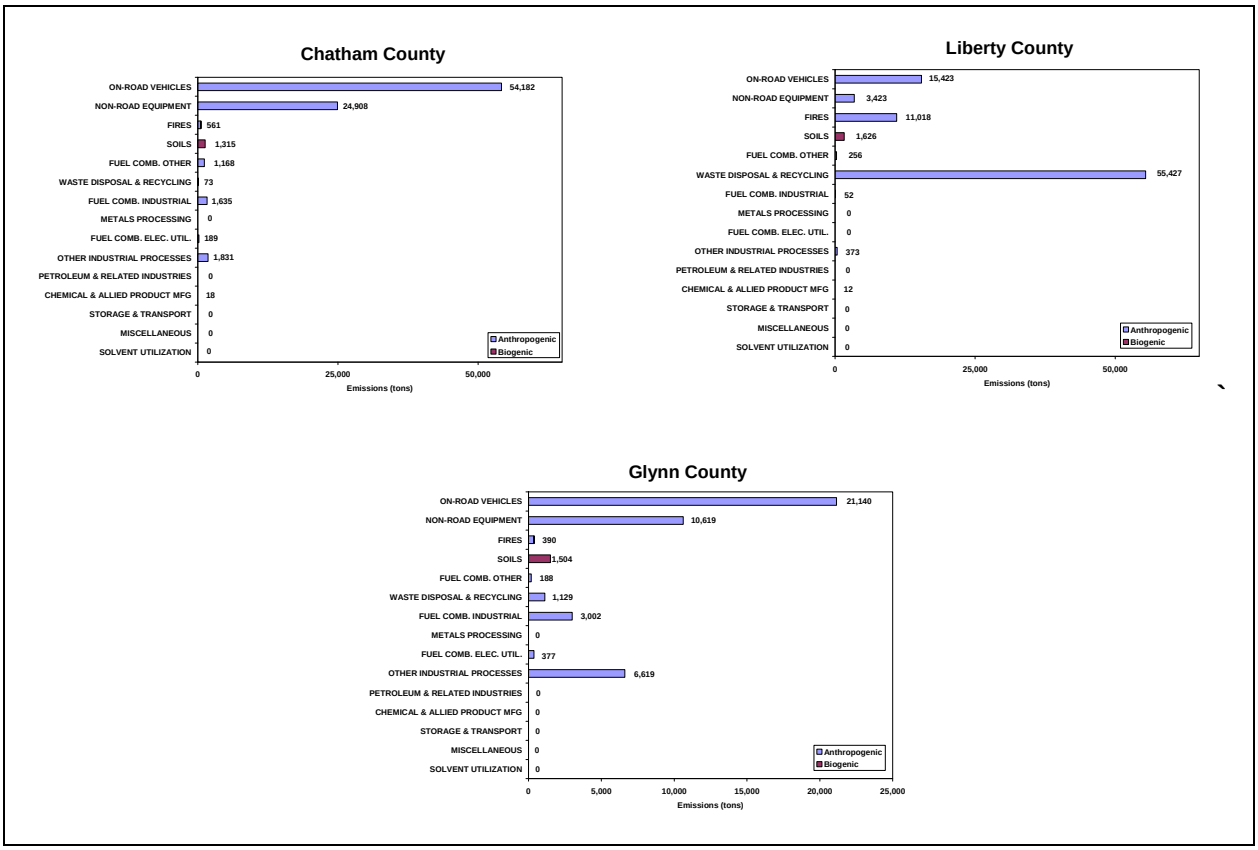


Figure A-5. CO emissions distribution for selected counties in Georgia (Figure 2 of 2).

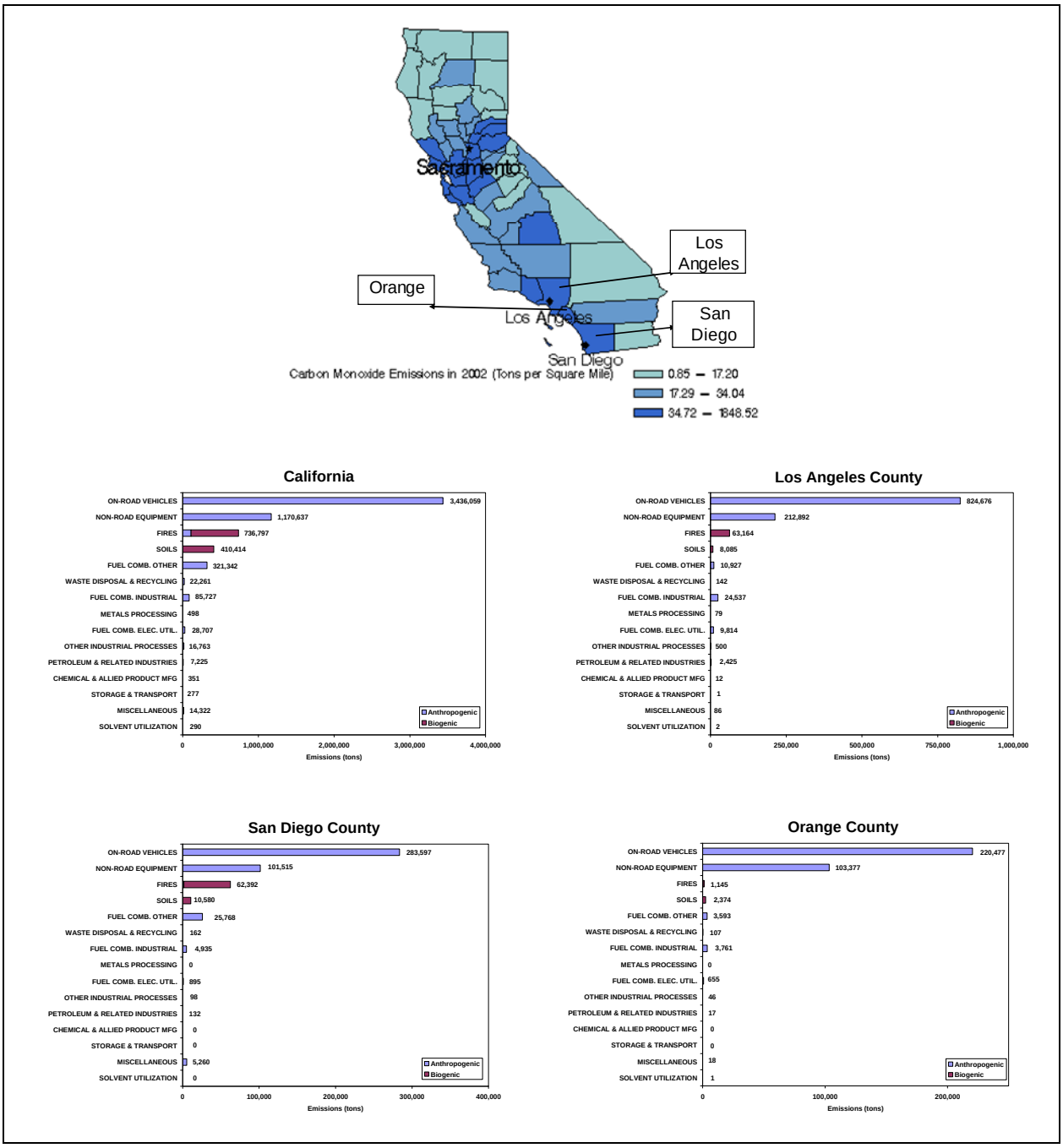
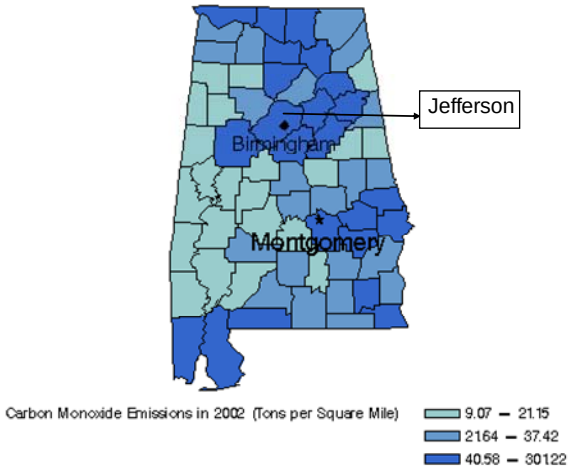
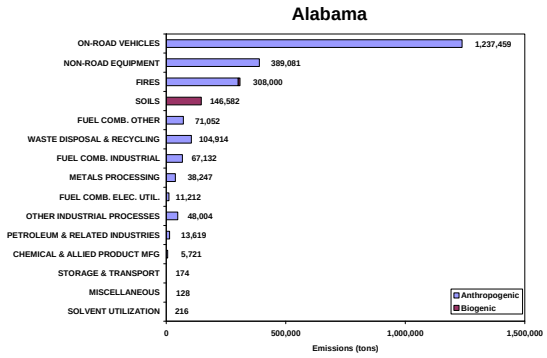


Figure A-6. CO emissions density map and distribution for the state of California and for selected counties in California.





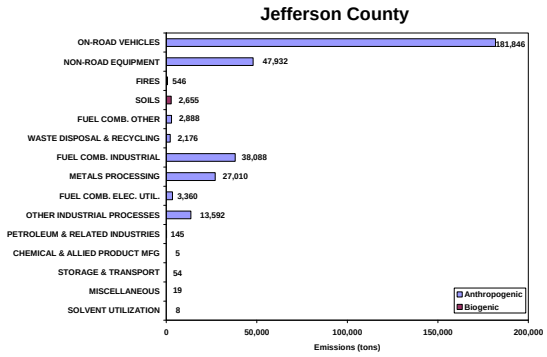


Figure A-7. CO emissions density map and distribution for the state of Alabama and for Jefferson County in Alabama.

Table A-1. Listing of all CO monitors currently in use, along with their limits of detection.

Method Code	Method Description	Reference Method Id	Fed MDL (ppm)
008	BENDIX 8501-5CA	RFCA-0276-008	0.50000
012	BECKMAN 866	RFCA-0876-012	0.50000
018	MSA 202S	RFCA-0177-018	0.50000
033	HORIBA AQM-10--11--12	RFCA-1278-033	0.50000
041	MONITOR LABS 8310	RFCA-0979-041	0.50000
048	HORIBA 300E/300SE	RFCA-1180-048	0.50000
050	MASS-CO 1 (MASSACHUSETTS)	RFCA-1280-050	0.50000
051	DASIBI 3003	RFCA-0381-051	0.50000
054	THERMO ELECTRON 48, 48C	RFCA-0981-054	0.50000
055	Gas Filter Correlation Thermo Electron 48C-TL	N/A	0.04000
066	MONITOR LABS 8830	RFCA-0388-066	0.50000
067	DASIBI 3008	RFCA-0488-067	0.50000
088	LEAR SIEGLER MODEL ML 9830	RFCA-0992-088	0.50000
093	API MODEL 300 GAS FILTER	RFCA-1093-093	0.50000
106	HORIBA INSTR. MODEL APMA-360	RFCA-0895-106	0.50000
108	ENVIRONMENT SA MODEL CO11M	RFCA-0995-108	0.50000
147	Environnement S.A. Model CO12M Co Analyzer	RFCA-0206-147	0.50000
158	HORIBA INSTR. MODEL APMA-370	RFCA-0506-158	0.50000
167	DKK-TOA Cork Mode GFC-311E	RFCA-0907-167	0.50000
172	SIR S.A. Model S5006	RFCA-0708-172	0.50000
554	Gas Filter Correlation Thermo Electron 48C-TLE	N/A	0.04000
588	Ecotech EC9830T	RFCA-0992-088	0.04000
593	API Model 300 EU	RFCA-1093-093	0.04000

Table A-2. Microscale monitors meeting 75% completeness criteria, 2005-2007.

Monitor Code	State Name	City Name	Traffic Count	Road Type
02-090-0002-42101-1	Alaska	Fairbanks	NR	NR
04-013-0016-42101-1	Arizona	Phoenix	50,000	ARTERIAL
04-019-1014-42101-1	Arizona	Tucson	41,200	MAJ ST OR HY
06-065-1003-42101-1	California	Riverside	40,000	FREEWAY
06-073-0007-42101-1	California	San Diego	6,000	THRU ST OR HY
08-013-0009-42101-1	Colorado	Longmont	20,000	MAJ ST OR HY
08-031-0002-42101-2	Colorado	Denver	17,200	MAJ ST OR HY
08-031-0019-42101-1	Colorado	Denver	500	MAJ ST OR HY
08-041-0015-42101-1	Colorado	Colorado Springs	44,200	MAJ ST OR HY
08-077-0018-42101-1	Colorado	Grand Junction	13,525	THRU ST OR HY
09-003-0017-42101-1	Connecticut	Hartford	10,000	THRU ST OR HY
11-001-023-42101-1	District Of Columbia	Washington	30,000	THRU ST OR HY
12-057-1070-42101-1	Florida	Tampa	133,855	ARTERIAL
12-086-4002-42101-1	Florida	Miami	5,000	LOCAL ST OR HY
12-095-1005-42101-1	Florida	Orlando	30,000	MAJ ST OR HY
12-103-0024-42101-1	Florida	Saint Petersburg	35,000	MAJ ST OR HY
12-103-2008-42101-1	Florida	Clearwater	67,751	MAJ ST OR HY
12-115-1004-42101-1	Florida	Sarasota	31,000	MAJ ST OR HY
13-121-0099-42101-1	Georgia	Atlanta	44,000	MAJ ST OR HY
17-031-0063-42101-1	Illinois	Chicago	5,000	LOCAL ST OR HY
17-031-6004-42101-1	Illinois	Maywood	NR	NR
17-143-0036-42101-1	Illinois	Peoria	18,500	ARTERIAL
17-167-0008-42101-1	Illinois	Springfield	16,400	MAJ ST OR HY
17-201-0011-42101-1	Illinois	Rockford	11,400	ARTERIAL
18-003-0011-42101-1	Indiana	Fort Wayne	30430	MAJ ST OR HY
18-089-0015-42101-1	Indiana	East Chicago	NR	NR
18-097-0072-42101-1	Indiana	Indianapolis	21,237	MAJ ST OR HY
18-163-0019-42101-1	Indiana	Evansville	24,498	LOCAL ST OR HY
21-111-1019-42101-1	Kentucky	Louisville	22,000	MAJ ST OR HY
27-053-0954-42101-1	Minnesota	Minneapolis	29,352	MAJ ST OR HY
27-123-0050-42101-1	Minnesota	St. Paul	NR	NR
27-137-0018-42101-1	Minnesota	Duluth	12,000	MAJ ST OR HY
27-145-3048-42101-1	Minnesota	St. Cloud	NR	NR
30-029-0010-42101-1	Montana	Kalispell	NR	THRU ST OR HY
30-031-0013-42101-1	Montana	Not in a city	2,000	THRU ST OR HY
33-011-1009-42101-1	New Hampshire	Nashua	40,000	MAJ ST OR HY
34-005-1001-42101-1	New Jersey	Burlington	8,000	THRU ST OR HY
34-017-1002-42101-1	New Jersey	Jersey City	25,000	THRU ST OR HY
37-067-0023-42101-1	North Carolina	Winston-Salem	22,000	MAJ ST OR HY
39-035-0048-42101-1	Ohio	Cleveland	24,300	THRU ST OR HY

Monitor Code	State Name	City Name	Traffic Count	Road Type
39-035-0051-42101-1	Ohio	Cleveland	16,150	MAJ ST OR HY
39-035-0053-42101-1	Ohio	Cleveland	19,550	MAJ ST OR HY
39-049-0036-42101-1	Ohio	Columbus	16,800	MAJ ST OR HY
39-061-0021-42101-1	Ohio	Cincinnati	17,250	LOCAL ST OR HY
39-085-0006-42101-1	Ohio	Mentor	25,240	MAJ ST OR HY
39-113-0034-42101-1	Ohio	Dayton	7,100	THRU ST OR HY
39-153-0022-42101-1	Ohio	Akron	13,150	MAJ ST OR HY
41-029-0018-42101-1	Oregon	Medford	NR	NR
41-039-0013-42101-1	Oregon	Eugene	17,500	MAJ ST OR HY
41-051-0087-42101-1	Oregon	Portland	4,150	LOCAL ST OR HY
45-079-0020-42101-1	South Carolina	Columbia	31,500	MAJ ST OR HY
47-037-0021-42101-1	Tennessee	Nashville	15,000	MAJ ST OR HY
47-157-0036-42101-1	Tennessee	Memphis	25,000	THRU ST OR HY
48-029-0046-42101-1	Texas	San Antonio	5,820	MAJ ST OR HY
48-201-0075-42101-1	Texas	Houston	6,576	LOCAL ST OR HY
53-033-0019-42101-1	Washington	Bellevue	100,000	MAJ ST OR HY
53-063-0049-42101-1	Washington	Spokane	10,000	MAJ ST OR HY

"NR" denotes that the value was not reported.

Table A-3. Middle scale monitors meeting 75% completeness criteria, 2005-2007.

Monitor Code	State Name	City Name	Traffic Count	Road Type
04-013-3010-42101-1	Arizona	Phoenix	18,500	ARTERIAL
06-029-0010-42101-1	California	Bakersfield	30,300	ARTERIAL
06-037-1301-42101-1	California	Lynwood	35,000	ARTERIAL
06-037-9033-42101-1	California	Lancaster	2,320	LOCAL ST OR HY
06-059-1003-42101-1	California	Costa Mesa	1,000	LOCAL ST OR HY
06-071-9004-42101-1	California	San Bernardino	21,900	THRU ST OR HY
06-085-0005-42101-1	California	San Jose	NR	LOCAL ST OR HY
12-0011-0010-42101-1	Florida	Fort Lauderdale	1,000	LOCAL ST OR HY
12-031-0080-42101-1	Florida	Jacksonville	1,000	LOCAL ST OR HY
12-031-0084-42101-1	Florida	Jacksonville	500	LOCAL ST OR HY
12-099-1004-42101-1	Florida	Palm Beach	30,000	MAJ ST OR HY
12-103-2006-42101-1	Florida	Clearwater	23,400	MAJ ST OR HY
17-031-3103-42101-1	Illinois	Schiller Park	47,900	ARTERIAL
20-209-0021-42101-1	Kansas	Kansas City	7,720	MAJ ST OR HY
24-510-0040-42101-1	Maryland	Baltimore	15,300	THRU ST OR HY
32-031-0022-42101-1	Nevada	Reno	NR	NR
34-003-0004-42101-1	New Jersey	Fort Lee	250,000	ARTERIAL
36-061-0056-42101-1	New York	New York	45,000	MAJ ST OR HY
39-049-0005-42101-1	Ohio	Columbus	36,600	FREEWAY
39-081-1001-42101-1	Ohio	Mingo Junction	2,500	LOCAL ST OR HY
39-151-0020-42101-1	Ohio	Canton	11,000	MAJ ST OR HY
40-143-0191-42101-1	Oklahoma	Tulsa	50,800	FREEWAY
42-003-0038-42101-1	Pennsylvania	Pittsburgh	15,000	MAJ ST OR HY
42-101-0047-42101-1	Pennsylvania	Philadelphia	NR	NR
45-019-0046-42101-1	South Carolina	Not in a city	NR	LOCAL ST OR HY
45-045-0008-42101-1	South Carolina	Greenville	NR	LOCAL ST OR HY
45-045-0009-42101-1	South Carolina	Taylors	9,500	LOCAL ST OR HY
47-163-0007-42101-1	Tennessee	Kingsport	NR	NR
48-439-1002-42101-1	Texas	Fort Worth	100	LOCAL ST OR HY
50-007-0014-42101-1	Vermont	Burlington	NR	MAJ ST OR HY
72-127-0003-42101-1	Puerto Rico	San Juan	64,000	MAJ ST OR HY

"NR" denotes that the value was not reported.

Table A-4. Neighborhood scale monitors meeting 75% completeness criteria, 2005-2007.

Monitor Code	State Name	City Name	Traffic Count	Road Type
01-073-1003-42101-1	Alabama	Fairfield	5,000	LOCAL ST OR HY
01-073-6004-42101-1	Alabama	Birmingham	NR	NR
02-020-0018-42101-1	Alaska	Anchorage	NR	NR
02-020-0048-42101-1	Alaska	Anchorage	5,000	LOCAL ST OR HY
02-090-0020-42101-1	Alaska	Fairbanks	NR	NR
04-013-0019-42101-1	Arizona	Phoenix	NR	LOCAL ST OR HY
04-013-3002-42101-1	Arizona	Phoenix	24,000	ARTERIAL
04-019-0002-42101-1	Arizona	Tucson	37,400	MAJ ST OR HY
04-019-1011-42101-1	Arizona	Tucson	47,000	MAJ ST OR HY
04-019-1028-42101-1	Arizona	Tucson	52,900	MAJ ST OR HY
06-001-1001-42101-1	California	Fremont (Centerville)	500	LOCAL ST OR HY
06-013-0002-42101-1	California	Concord	41,218	MAJ ST OR HY
06-037-5005-42101-1	California	Los Angeles	1,252	LOCAL ST OR HY
06-053-1003-42101-1	California	Salinas	33,193	THRU ST OR HY
06-065-9001-42101-1	California	Lake Elsinore	NR	NR
06-067-0007-42101-1	California	Sacramento	20,000	THRU ST OR HY
06-073-0001-42101-1	California	Chula Vista	5,000	LOCAL ST OR HY
06-073-1002-42101-1	California	Escondido	NR	NR
06-073-2007-42101-1	California	Otay Mesa	18,000	LOCAL ST OR HY
06-083-1025-42101-1	California	Capitan	NR	NR
06-083-2004-42101-1	California	Lompoc	NR	NR
06-083-2011-42101-1	California	Goleta	5,000	THRU ST OR HY
06-083-4003-42101-1	California	Vandenberg Air Force Base	NR	NR
08-01-3001-42101-1	Colorado	Welby	500	EXPRESSWAY
08-067-7001-42101-1	Colorado	Not in a city	2,436	LOCAL ST OR HY
08-069-1004-42101-1	Colorado	Fort Collins	5,000	THRU ST OR HY
08-123-0010-42101-1	Colorado	Greeley	6,650	THRU ST OR HY
11-001-0041-42101-1	District Of Columbia	Washington	540	LOCAL ST OR HY
12-011-2004-42101-1	Florida	Pompano Beach	1,000	LOCAL ST OR HY
12-011-3002-42101-1	Florida	Hollywood	1,000	LOCAL ST OR HY
12-031-0083-42101-1	Florida	Jacksonville	10,000	LOCAL ST OR HY
12-086-0031-42101-1	Florida	Miami	62,000	MAJ ST OR HY
12-086-1019-42101-1	Florida	Miami	8,000	MAJ ST OR HY
12-095-2002-42101-1	Florida	Winter Park	7,000	MAJ ST OR HY
12-103-0018-42101-1	Florida	Saint Petersburg	2,000	MAJ ST OR HY
17-031-4002-42101-1	Illinois	Cicero	NR	NR
17-163-0010-42101-1	Illinois	East Saint Louis	8,900	LOCAL ST OR HY
18-097-0073-42101-1	Indiana	Indianapolis (Remainder)	11,261	THRU ST OR HY
20-173-0010-42101-1	Kansas	Wichita	6,884	LOCAL ST OR HY
21-111-0046-42101-1	Kentucky	Louisville	6,500	THRU ST OR HY

Monitor Code	State Name	City Name	Traffic Count	Road Type
22-033-0009-42101-1	Louisiana	Baton Rouge	5,000	LOCAL ST OR HY
25-013-0016-42101-1	Massachusetts	Springfield	5,000	LOCAL ST OR HY
25-017-0007-42101-1	Massachusetts	Lowell	15,000	THRU ST OR HY
25-025-0042-42101-1	Massachusetts	Boston	12,785	LOCAL ST OR HY
27-03-0600-42101-1	Minnesota	Fridley	1,400	LOCAL ST OR HY
27-037-0020-42101-1	Minnesota	Rosemount	NR	NR
27-037-0423-42101-1	Minnesota	Inver Grove Heights (RR name Inver Grove)	NR	NR
29-510-0086-42101-1	Missouri	St. Louis	81,850	MAJ ST OR HY
30-111-0085-42101-1	Montana	Billings	5,700	THRU ST OR HY
31-055-0035-42101-1	Nebraska	Omaha	2,900	LOCAL ST OR HY
32-003-0538-42101-1	Nevada	Las Vegas	20,000	LOCAL ST OR HY
32-003-0539-42101-1	Nevada	Las Vegas	21,000	MAJ ST OR HY
32-003-0561-42101-1	Nevada	Las Vegas	28,400	MAJ ST OR HY
32-003-1021-42101-1	Nevada	Las Vegas	NR	NR
32-003-2002-42101-1	Nevada	Las Vegas	6,750	THRU ST OR HY
32-031-0016-42101-1	Nevada	Reno	22,700	LOCAL ST OR HY
32-031-0020-42101-1	Nevada	Reno	NR	NR
32-031-0025-42101-1	Nevada	Reno	NR	NR
32-031-1005-42101-1	Nevada	Sparks	2,600	LOCAL ST OR HY
32-031-2009-42101-1	Nevada	Lemmon Valley-Golden Valley	NR	NR
32-510-0004-42101-1	Nevada	Carson City	1	LOCAL ST OR HY
33-011-0020-42101-1	New Hampshire	Manchester	500	LOCAL ST OR HY
34-003-5001-42101-1	New Jersey	Hackensack	15,000	THRU ST OR HY
34-007-0003-42101-1	New Jersey	Camden	45,000	MAJ ST OR HY
35-001-019-42101-1	New Mexico	Albuquerque	1	ARTERIAL
35-001-0023-42101-1	New Mexico	Albuquerque	41,200	MAJ ST OR HY
35-001-0024-42101-1	New Mexico	Albuquerque	15,500	MAJ ST OR HY
35-001-0028-42101-1	New Mexico	Albuquerque	2,0600	THRU ST OR HY
35-001-1014-42101-1	New Mexico	Albuquerque	8,000	THRU ST OR HY
35-043-9004-42101-1	New Mexico	Not in a city	100	LOCAL ST OR HY
36-063-2008-42101-1	New York	Niagara Falls	5,000	LOCAL ST OR HY
37-119-0041-42101-1	North Carolina	Charlotte	16,400	MAJ ST OR HY
37-119-0041-42101-3	North Carolina	Charlotte	16,400	MAJ ST OR HY
39-035-0070-42101-1	Ohio	Cleveland	100	LOCAL ST OR HY
39-113-0028-42101-1	Ohio	Dayton	5,100	LOCAL ST OR HY
39-153-0020-42101-1	Ohio	Akron	200	LOCAL ST OR HY
40-021-9002-42101-1	Oklahoma	Park Hill	10,300	LOCAL ST OR HY
40-071-9010-42101-1	Oklahoma	Not in a city	300	LOCAL ST OR HY
40-109-0047-42101-1	Oklahoma	Oklahoma City	27,000	MAJ ST OR HY
41-051-0080-42101-1	Oregon	Portland	5,000	LOCAL ST OR HY
42-003-0031-42101-1	Pennsylvania	Pittsburgh	4,562	THRU ST OR HY
42-013-0801-42101-1	Pennsylvania	Altoona	100	LOCAL ST OR HY

Monitor Code	State Name	City Name	Traffic Count	Road Type
42-017-0012-42101-1	Pennsylvania	Bristol	500	LOCAL ST OR HY
42-021-0011-42101-1	Pennsylvania	Johnstown	6,000	LOCAL ST OR HY
42-049-0003-42101-1	Pennsylvania	Erie	1,000	LOCAL ST OR HY
42-071-0007-42101-1	Pennsylvania	Lancaster	2,000	THRU ST OR HY
42-073-0015-42101-1	Pennsylvania	New Castle	4,500	LOCAL ST OR HY
42-091-0013-42101-1	Pennsylvania	Norristown	8,500	MAJ ST OR HY
42-095-0025-42101-1	Pennsylvania	Freemansburg	100	LOCAL ST OR HY
42-101-0004-42101-1	Pennsylvania	Philadelphia	13800	MAJ ST OR HY
42-101-0027-42101-1	Pennsylvania	Philadelphia	46000	MAJ ST OR HY
42-107-0003-42101-1	Pennsylvania	Shenandoah	100	LOCAL ST OR HY
42-125-0005-42101-1	Pennsylvania	Charleroi	NR	NR
44-007-1010-42101-1	Rhode Island	East Providence	100,000	FREEWAY
48-061-0006-42101-1	Texas	Brownsville	30	LOCAL ST OR HY
48-113-0069-42101-2	Texas	Dallas	1,000	LOCAL ST OR HY
48-141-0002-42101-1	Texas	El Paso	7,270	THRU ST OR HY
48-141-0029-42101-1	Texas	El Paso	2,790	LOCAL ST OR HY
48-141-0037-42101-1	Texas	El Paso	5,000	LOCAL ST OR HY
48-141-0044-42101-1	Texas	El Paso	15,200	ARTERIAL
48-141-0053-42101-1	Texas	El Paso	1,992	FREEWAY
48-141-0057-42101-1	Texas	Socorro	500	LOCAL ST OR HY
48-141-0058-42101-1	Texas	El Paso	1,080	LOCAL ST OR HY
48-201-0024-42101-1	Texas	Not in a city	5,300	MAJ ST OR HY
48-201-0047-42101-1	Texas	Houston	5,860	MAJ ST OR HY
48-201-1035-42101-1	Texas	Houston	13,440	MAJ ST OR HY
48-201-1039-42101-1	Texas	Deer Park	16010	MAJ ST OR HY
48-439-3011-42101-1	Texas	Arlington	10,573	LOCAL ST OR HY
48-453-0014-42101-1	Texas	Austin	3,420	LOCAL ST OR HY
48-479-0017-42101-1	Texas	Laredo	30,380	ARTERIAL
49-035-0003-42101-1	Utah	Not in a city	16,500	THRU ST OR HY
50-021-0002-42101-1	Vermont	Rutland	NR	NR
51-059-0005-42101-1	Virginia	Not in a city	25	LOCAL ST OR HY
51-650-0004-42101-2	Virginia	Hampton	2,000	LOCAL ST OR HY
51-760-0024-42101-1	Virginia	Richmond	7,591	THRU ST OR HY
51-770-0015-42101-1	Virginia	Roanoke	NR	NR
54-009-0011-42101-1	West Virginia	Weirton	NR	NR
54-029-0009-42101-1	West Virginia	Weirton	NR	NR
54-029-1004-42101-1	West Virginia	Weirton	50	LOCAL ST OR HY

"NR" denotes that the value was not reported.

Table A-5. Urban scale monitors meeting 75% completeness criteria, 2005-2007.

Monitor Code	State Name	City Name	Traffic Count	Road Type
06-059-0007-42101-1	California	Anaheim	1,000	LOCAL ST OR HY
13-089-0002-42101-1	Georgia	Decatur	9,250	LOCAL ST OR HY
13-223-0003-42101-1	Georgia	Not in a city	6	LOCAL ST OR HY
25-027-0023-42101-1	Massachusetts	Worcester	NR	LOCAL ST OR HY
34-007-1001-42101-1	New Jersey	Not in a city	4,000	THRU ST OR HY
42-003-0010-42101-1	Pennsylvania	Pittsburgh	1,000	MAJ ST OR HY
42-007-0014-42101-1	Pennsylvania	Beaver Falls	NR	NR
42-129-0008-42101-1	Pennsylvania	Greensburg	100	THRU ST OR HY
42-133-0008-42101-1	Pennsylvania	York	8,400	THRU ST OR HY
48-141-0055-42101-1	Texas	El Paso	2450	LOCAL ST OR HY
51-059-0030-42101-1	Virginia	Franconia	200	LOCAL ST OR HY

"NR" denotes that the value was not reported.

Table A-6. Regional scale monitors meeting 75% completeness criteria, 2005-2007.

Monitor Code	State Name	City Name	Traffic Count	Road Type
23-009-0103-42101-1	Maine	Not in a city	3,500	LOCAL ST OR HY
35-001-0029-42101-1	New Mexico	South Valley	8,800	LOCAL ST OR HY

"NR" denotes that the value was not reported.

Table A-7. Monitors meeting 75% completeness criteria, 2005-2007 with no scale delared.

Monitor Code	State Name	City Name	Traffic Count	Road Type
04-013-9997-42101-1	Arizona	Phoenix	250	LOCAL ST OR HY
06-001-0007-42101-1	California	Livermore	2,400	LOCAL ST OR HY
06-007-0002-42101-1	California	Chico	44,000	LOCAL ST OR HY
06-013-1002-42101-1	California	Bethel Island	NR	NR
06-013-1004-42101-1	California	San Pablo	NR	THRU ST OR HY
06-013-3001-42101-1	California	Pittsburg	9,600	THRU ST OR HY
06-019-0007-42101-1	California	Fresno	500	LOCAL ST OR HY
06-019-0008-42101-1	California	Fresno	20,000	MAJ ST OR HY
06-019-0242-42101-1	California	Fresno	500	LOCAL ST OR HY
06-019-5001-42101-1	California	Clovis	16,461	THRU ST OR HY
06-025-0005-42101-1	California	Calexico	7,000	LOCAL ST OR HY
06-025-0006-42101-1	California	Calexico	10	THRU ST OR HY
06-025-1003-42101-1	California	El Centro	NR	NR
06-037-0002-42101-1	California	Azusa	600	THRU ST OR HY
06-037-0113-42101-1	California	West Los Angeles	NR	NR
06-037-1002-42101-1	California	Burbank	2,400	LOCAL ST OR HY
06-037-1103-42101-1	California	Los Angeles	9,000	THRU ST OR HY
06-037-1201-42101-1	California	Reseda	NR	NR
06-037-1701-42101-1	California	Pomona	NR	NR
06-037-2005-42101-1	California	Pasadena	18,000	THRU ST OR HY
06-037-4002-42101-1	California	Long Beach	24,000	LOCAL ST OR HY
06-037-6012-42101-1	California	Santa Clarita	4,395	LOCAL ST OR HY
06-041-0001-42101-1	California	San Rafael	15,000	MAJ ST OR HY
06-045-0008-42101-1	California	Ukiah	12,000	LOCAL ST OR HY
06-045-0009-42101-1	California	Willits	18,000	MAJ ST OR HY
06-055-0003-42101-1	California	Napa	NR	NR
06-059-2022-42101-1	California	Mission Viejo	42,400	MAJ ST OR HY
06-059-5001-42101-1	California	La Habra	NR	NR
06-065-5001-42101-1	California	Palm Springs	NR	NR
06-065-8001-42101-1	California	Rubidoux (West Riverside)	18,000	THRU ST OR HY
06-067-0002-42101-1	California	North Highlands	NR	NR
06-067-0006-42101-1	California	Sacramento	10,000	LOCAL ST OR HY
06-067-0013-42101-1	California	Sacramento	100	LOCAL ST OR HY
06-071-0001-42101-1	California	Barstow	NR	NR
06-071-0306-42101-1	California	Victorville	454	LOCAL ST OR HY
06-071-1004-42101-1	California	Upland	15,000	THRU ST OR HY
06-075-0005-42101-1	California	San Francisco	240,700	FREEWAY
06-077-1002-42101-1	California	Stockton	6,000	LOCAL ST OR HY
06-081-1001-42101-1	California	Redwood City	1,000	LOCAL ST OR HY
06-087-0003-42101-1	California	Davenport	NR	NR

Monitor Code	State Name	City Name	Traffic Count	Road Type
06-095-0004-42101-1	California	Vallejo	9,350	THRU ST OR HY
06-097-0003-42101-1	California	Santa Rosa	2,608	THRU ST OR HY
06-099-0005-42101-1	California	Modesto	NR	NR
06-099-0006-42101-1	California	Turlock	500	LOCAL ST OR HY
09-003-1003-42101-1	Connecticut	East Hartford	800	LOCAL ST OR HY
10-003-1008-42101-1	Delaware	Not in a city	NR	NR
10-003-2004-42101-1	Delaware	Wilmington	28,046	MAJ ST OR HY
15-003-0010-42101-1	Hawaii	Ewa Beach	NR	NR
18-063-0002-42101-1	Indiana	Pittsboro	500	LOCAL ST OR HY
25-025-0002-42101-1	Massachusetts	Boston	35,000	MAJ ST OR HY
29-077-0032-42101-1	Missouri	Springfield	1,000	LOCAL ST OR HY
29-189-0004-42101-1	Missouri	Sunset Hills	33,300	MAJ ST OR HY
30-013-0001-42101-1	Montana	Great Falls	26,155	MAJ ST OR HY
31-109-0018-42101-1	Nebraska	Lincoln	NR	NR
34-023-2003-42101-1	New Jersey	Perth Amboy	14,000	LOCAL ST OR HY
34-025-2001-42101-1	New Jersey	Freehold	NR	NR
34-027-0003-42101-1	New Jersey	Morristown	NR	NR
36-001-0012-42101-1	New York	Albany	12,000	MAJ ST OR HY
36-029-0005-42101-1	New York	Buffalo	26,000	ARTERIAL
36-055-1007-42101-1	New York	Rochester	NR	NR
36-067-0017-42101-1	New York	Syracuse	NR	NR
36-081-0124-42101-1	New York	New York	10,000	EXPRESSWAY
36-093-0003-42101-1	New York	Schenectady	37,000	EXPRESSWAY
36-103-0009-42101-2	New York	Holtsville	10,000	THRU ST OR HY
48-479-0016-42101-1	Texas	Laredo	16,180	MAJ ST OR HY
49-057-0006-42101-1	Utah	Ogden	38,000	ARTERIAL
51-013-0020-42101-1	Virginia	Not in a city	6,000	MAJ ST OR HY
51-059-1005-42101-1	Virginia	Annandale	24,000	MAJ ST OR HY
51-059-5001-42101-1	Virginia	McLean	36,845	MAJ ST OR HY
51-510-0009-42101-1	Virginia	Alexandria	3,974	LOCAL ST OR HY
56-039-1012-42101-1	Wyoming	Not in a city	NR	NR

"NR" denotes that the value was not reported.

Table A-8. Numbers of high LOD and trace-level monitors in each state that met completeness criteria for 2005-2007.

State	Number of high LOD monitors	Number of trace-level monitors
Alabama	2	0
Alaska	4	0
Arizona	9	0
Arkansas	0	0
California	65	0
Colorado	9	0
Connecticut	2	0
Delaware	2	0
District of Columbia	2	0
Florida	18	0
Georgia	3	0
Hawaii	1	0
Idaho	0	0
Illinois	8	0
Indiana	6	0
Iowa	0	0
Kansas	2	0
Kentucky	2	0
Louisiana	0	1
Maine	0	1
Maryland	1	0
Massachusetts	4	1
Michigan	0	0
Minnesota	7	0
Mississippi	0	0
Missouri	3	0
Montana	4	0
Nebraska	2	0
Nevada	12	0
New Hampshire	2	0
New Jersey	9	0
New Mexico	7	0
New York	9	0
North Carolina	2	1
North Dakota	0	0
Ohio	14	0
Oklahoma	4	0
Oregon	3	1
Pennsylvania	19	0
Puerto Rico	1	0

State	Number of high LOD monitors	Number of trace-level monitors
Rhode Island	1	0
South Carolina	3	1
South Dakota	0	0
Tennessee	3	0
Texas	19	2
Utah	2	0
Vermont	2	0
Virginia	9	0
Washington	2	0
West Virginia	3	0
Wisconsin	0	0
Wyoming	1	0

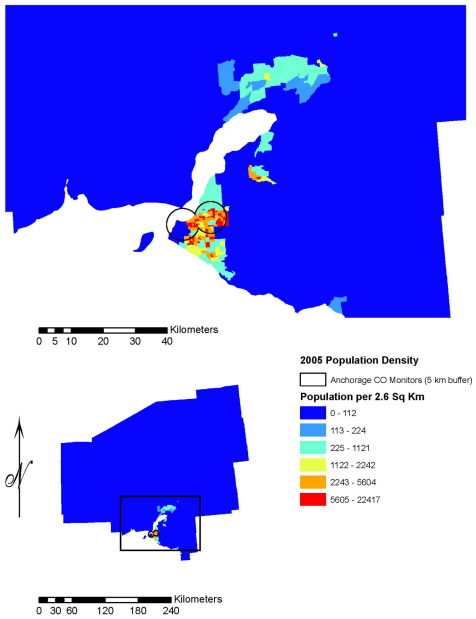


Figure A-8. Map of CO monitor locations with respect to population density in the Anchorage CBSA, total population.

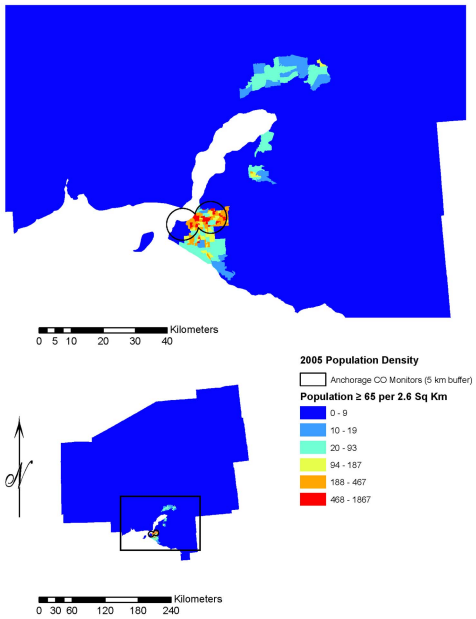


Figure A-9. Map of CO monitor locations with respect to population density in the Anchorage CBSA, ages 65 yr and older.

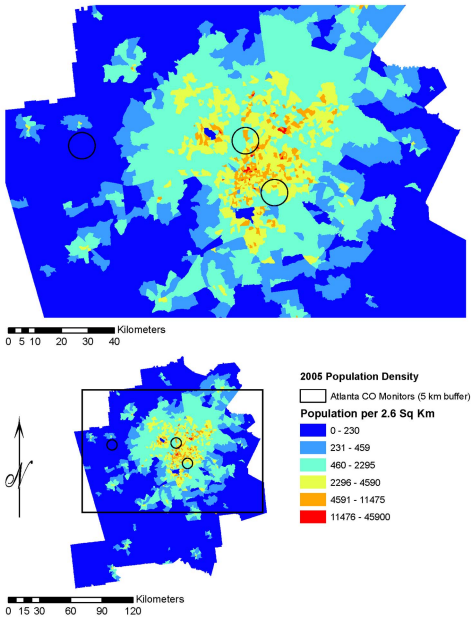


Figure A-10. Map of CO monitor locations with respect to population density in the Atlanta CSA, total population.

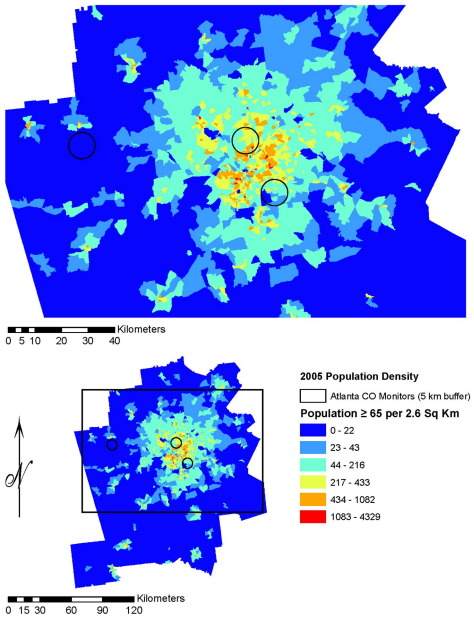


Figure A-11. Map of CO monitor locations with respect to population density in the Atlanta CSA, ages 65 yr and older.

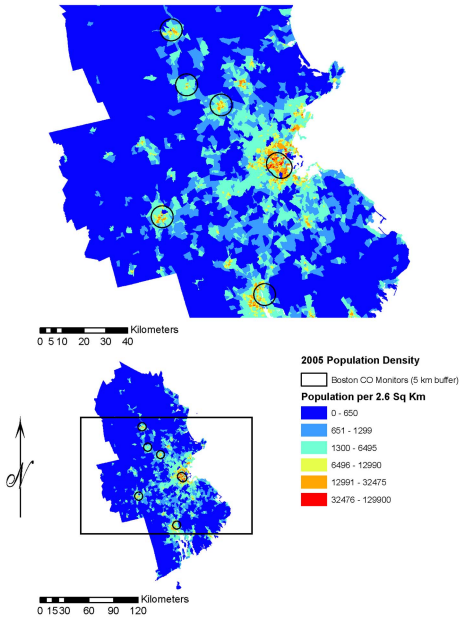


Figure A-12. Map of CO monitor locations with respect to population density in the Boston CSA, total population.

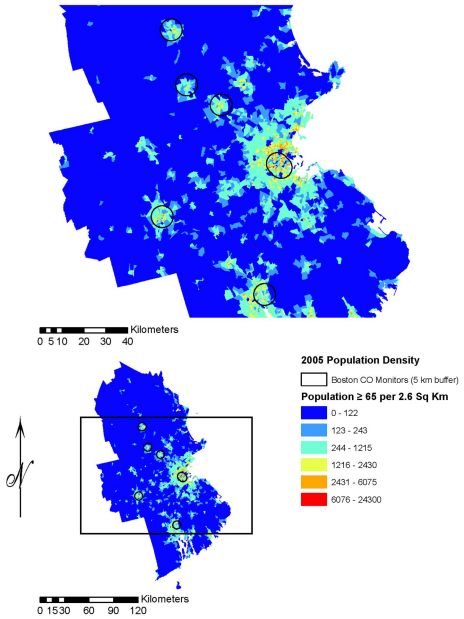


Figure A-13. Map of CO monitor locations with respect to population density in the Boston CSA, ages 65 yr and older.

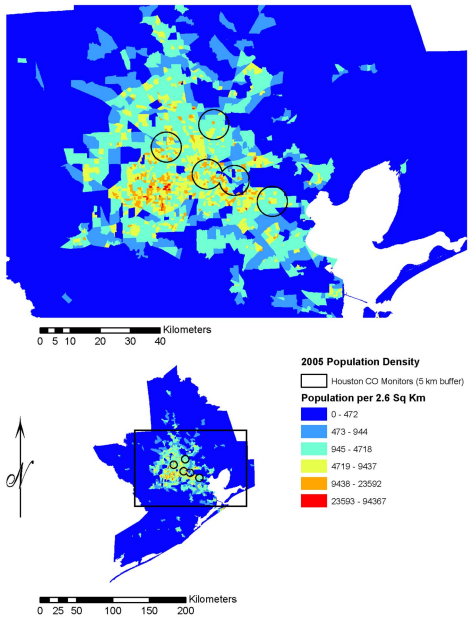


Figure A-14. Map of CO monitor locations with respect to population density in the Houston CSA, total population.

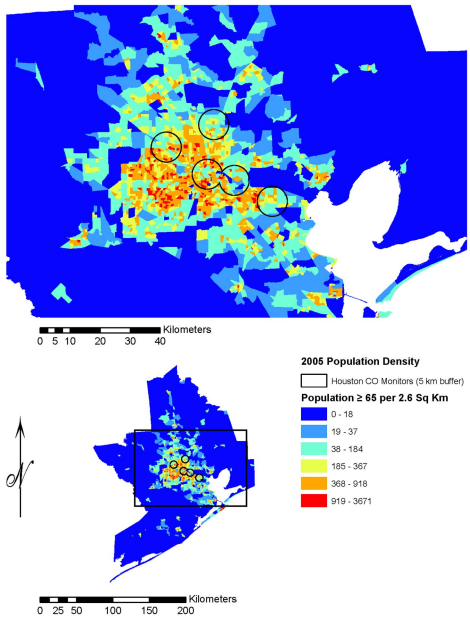


Figure A-15. Map of CO monitor locations with respect to population density in the Houston CSA, ages 65 yr and older.

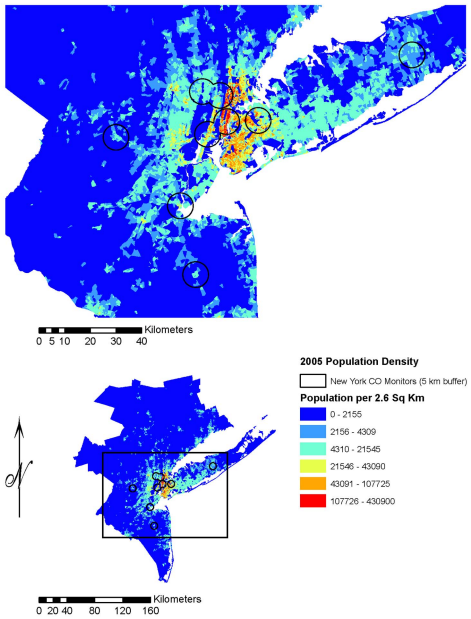


Figure A-16. Map of CO monitor locations with respect to population density in the New York City CSA, total population.

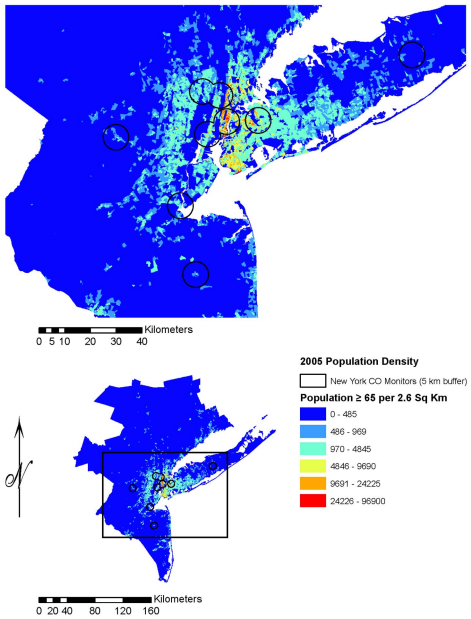


Figure A-17. Map of CO monitor locations with respect to population density in the New York City CSA, ages 65 yr and older.

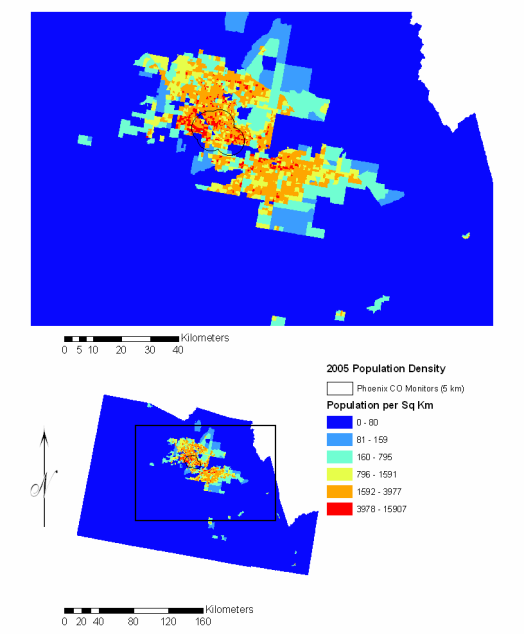


Figure A-18. Map of CO monitor locations with respect to population density in the Phoenix CSA, total population.

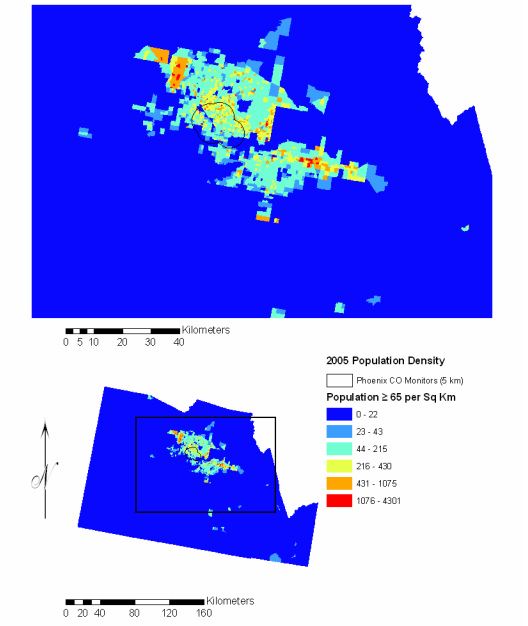


Figure A-19. Map of CO monitor locations with respect to population density in the Phoenix CSA, ages 65 yr and older.

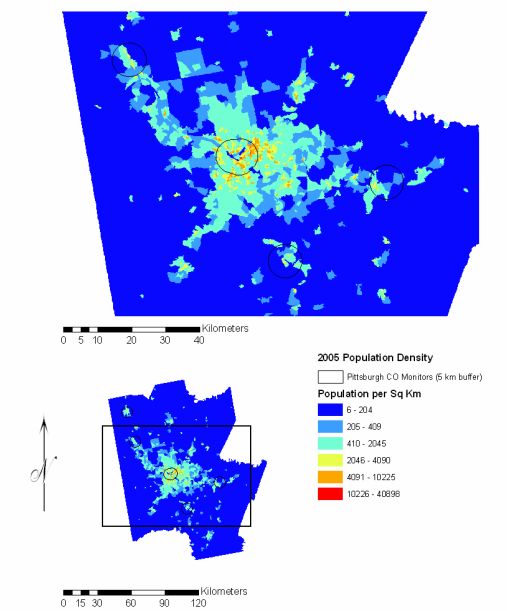


Figure A-20. Map of CO monitor locations with respect to population density in the Pittsburgh CSA, total population.

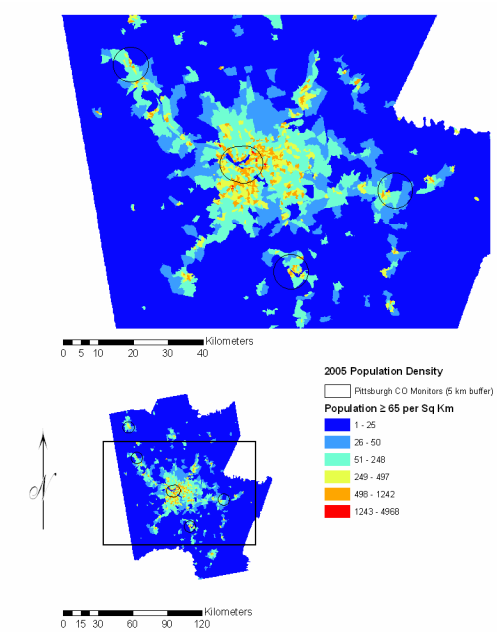


Figure A-21. Map of CO monitor locations with respect to population density in the Pittsburgh CSA, ages 65 yr and older.

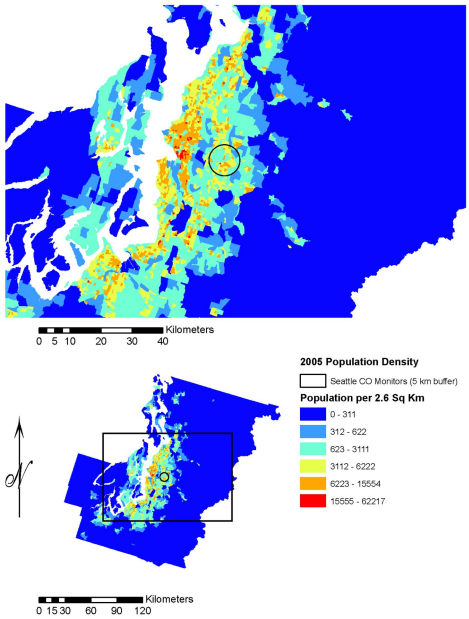


Figure A-22. Map of CO monitor locations with respect to population density in the Seattle CSA, total population.

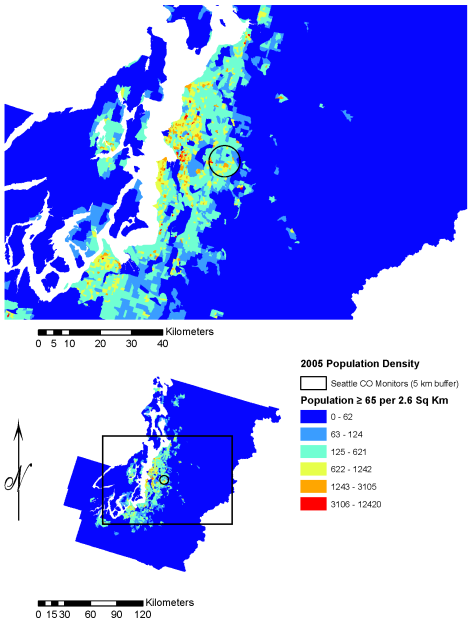


Figure A-23. Map of CO monitor locations with respect to population density in the Seattle CSA, ages 65 yr and older.

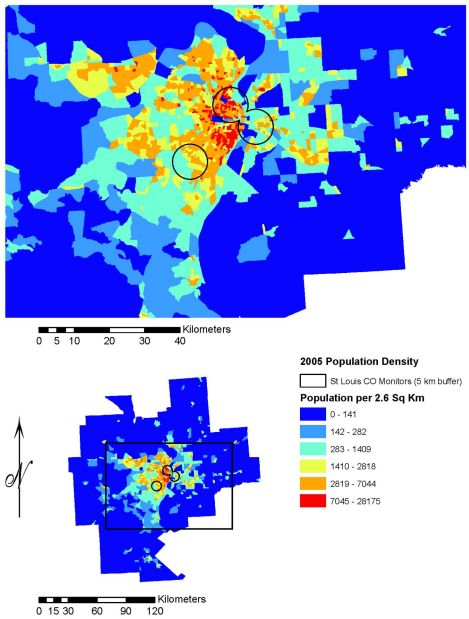


Figure A-24. Map of CO monitor locations with respect to population density in the St. Louis CSA, total population.

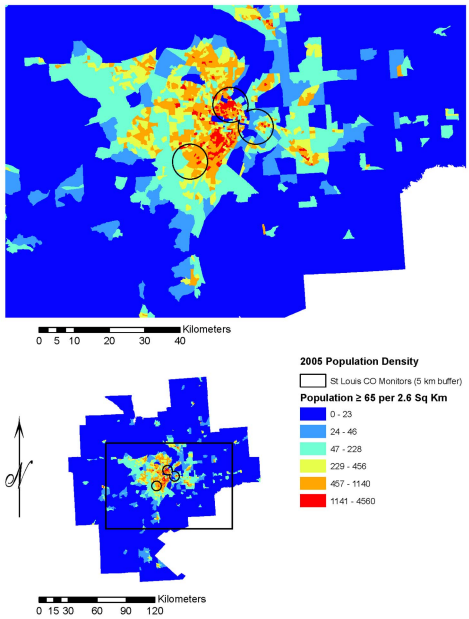


Figure A-25. Map of CO monitor locations with respect to population density in the St. Louis CSA, ages 65 yr and older.

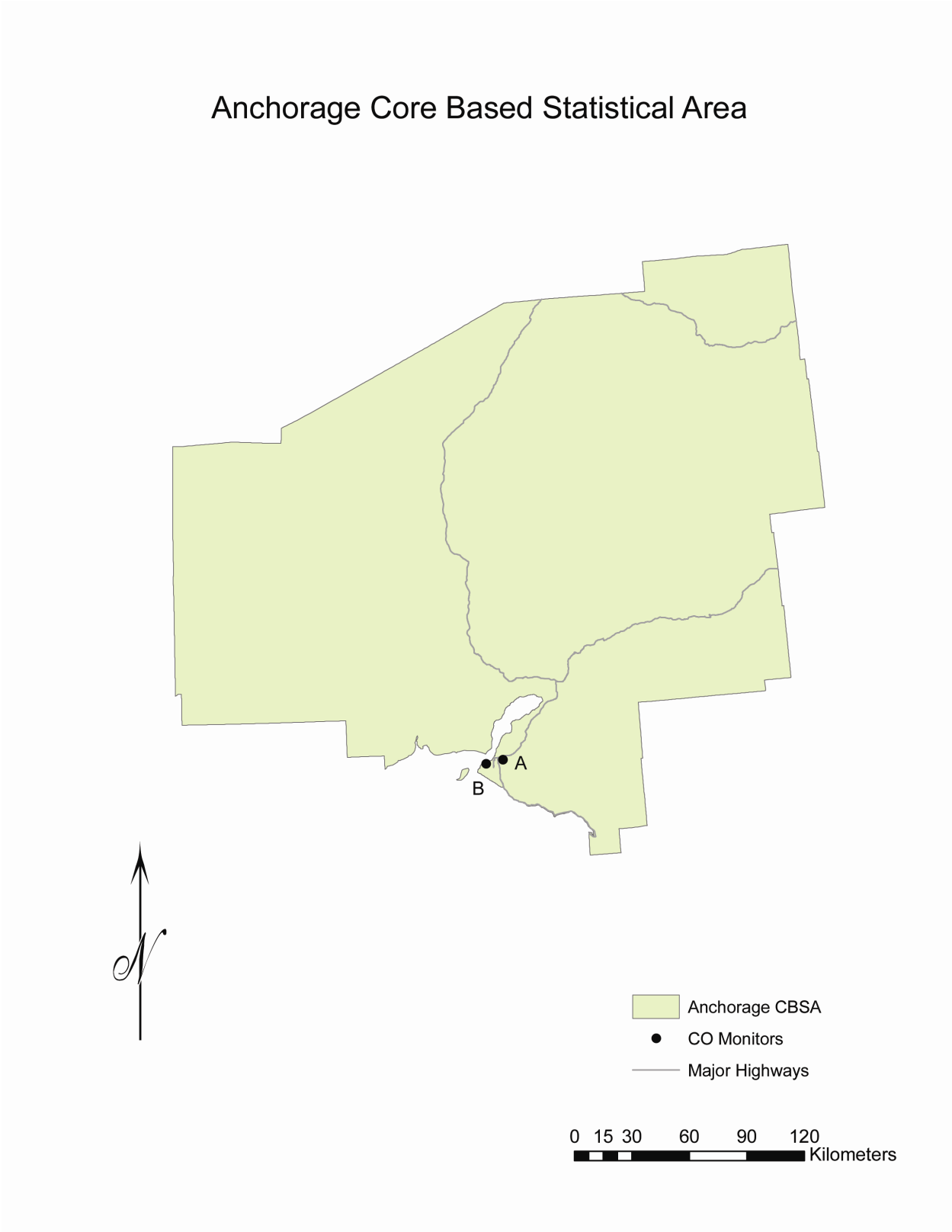


Figure A-26. Map of CO monitor locations with AQS Site IDs for Anchorage, AK.

Table A-9. Table of inter-sampler comparison statistics, including Pearson r, P90 (ppm), COD, and d (km), as defined in the text, for each pair of hourly CO monitors reporting to AQS in Anchorage, AK.

		Neighborhood	
		A	**B**
Neighborhood	**A**	1.00	0.73
		0.0	1.1
		0.00	0.32
		0	9.0
	B	**Legend**	1.00
		r	0.0
		P90	0.00
		COD	0
		d	

	A	B
Site ID	02-020-0018	02-020-0048
Mean	1.04	1.10
SD	0.94	1.04
Obs	12969	12703

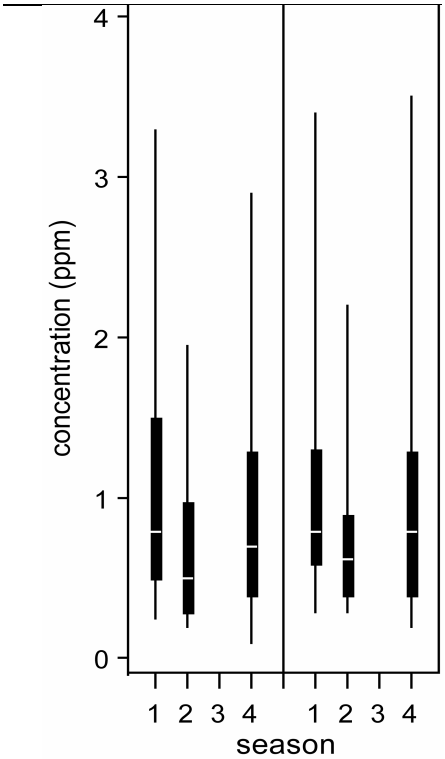


Figure A-27. Box plots illustrating the seasonal distribution of hourly CO concentrations in Anchorage, AK. Note: 1 = winter, 2 = spring, 3 = summer, and 4 = fall on the x-axis.

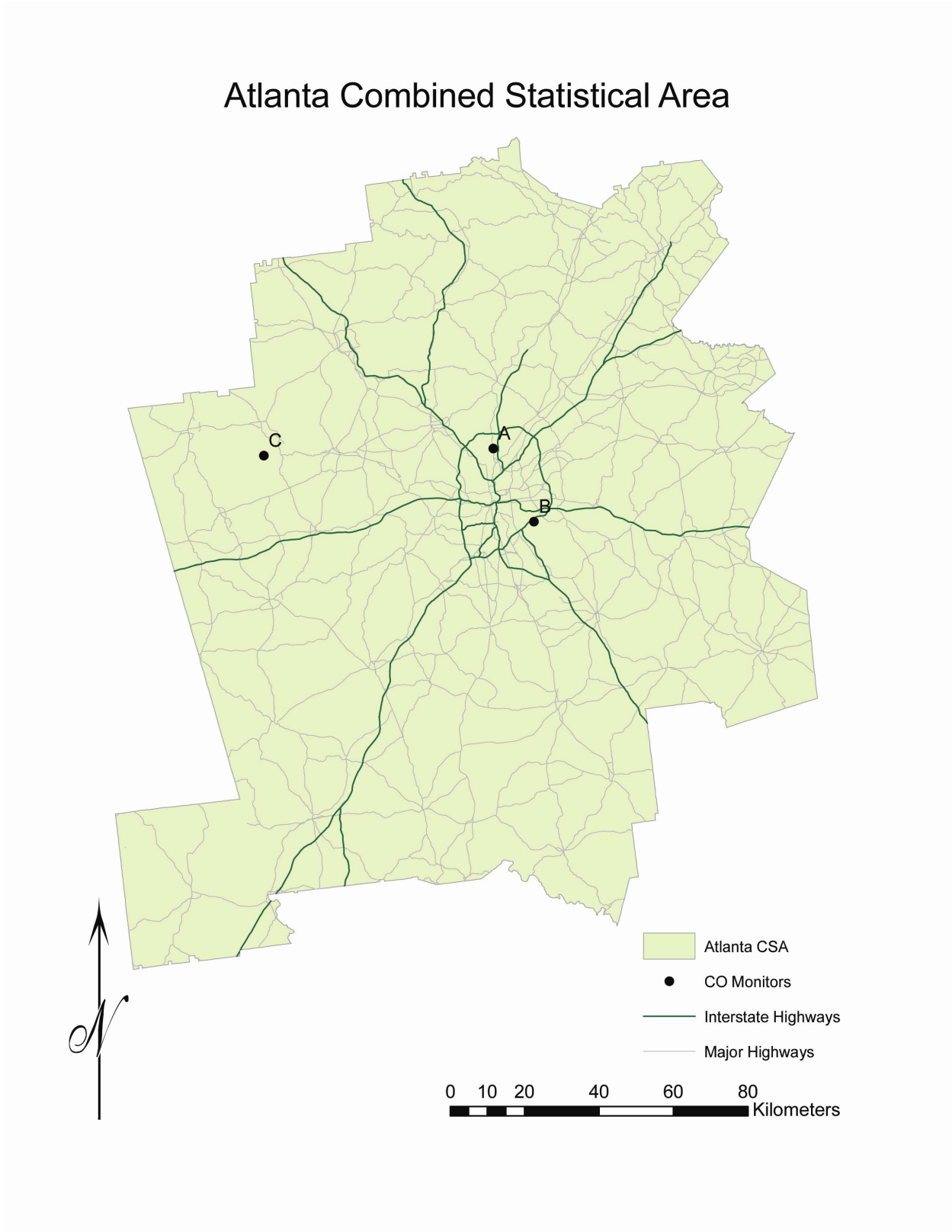


Figure A-28. Map of CO monitor locations with AQS Site IDs for Atlanta, GA.

Table A-10. Table of inter-sampler comparison statistics, including Pearson r, P90 (ppm), COD, and d (km), as defined in the text, for each pair of hourly CO monitors reporting to AQS in Atlanta, GA.

		Micro	Urban	
		A	B	C
Micro	A	1.00	0.60	0.10
		0.0	0.5	0.7
		0.00	0.27	0.38
		0	22.5	61.7
Urban	B		1.00	0.12
			0.0	0.7
			0.00	0.37
			0	74.7
	C	Legend		1.00
		r		0.0
		P90		0.00
		COD		0
		d		

	A	B	C
Site ID	13–121–0099	13–089–0002	13–223–0003
Mean	0.58	0.53	0.30
SD	0.30	0.35	0.13
Obs	25440	25531	25712

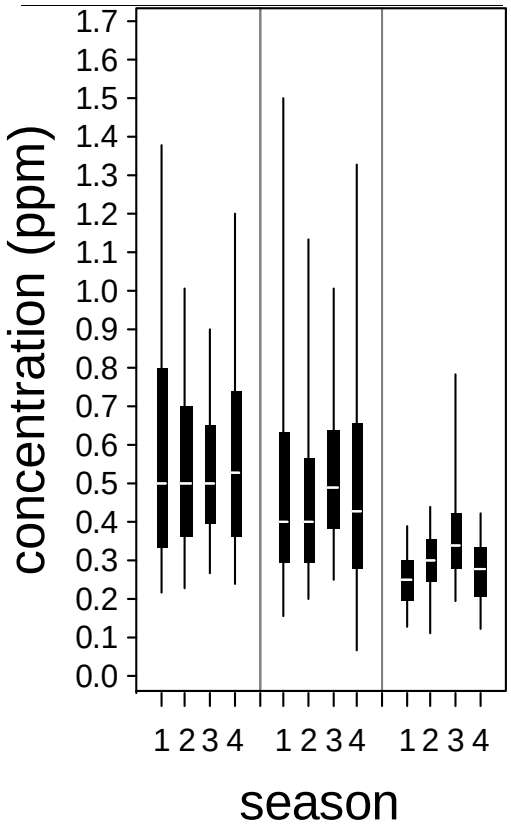


Figure A-29. Box plots illustrating the seasonal distribution of hourly CO concentrations in Atlanta, GA. Note: 1 = winter, 2 = spring, 3 = summer, and 4 = fall on the x-axis.

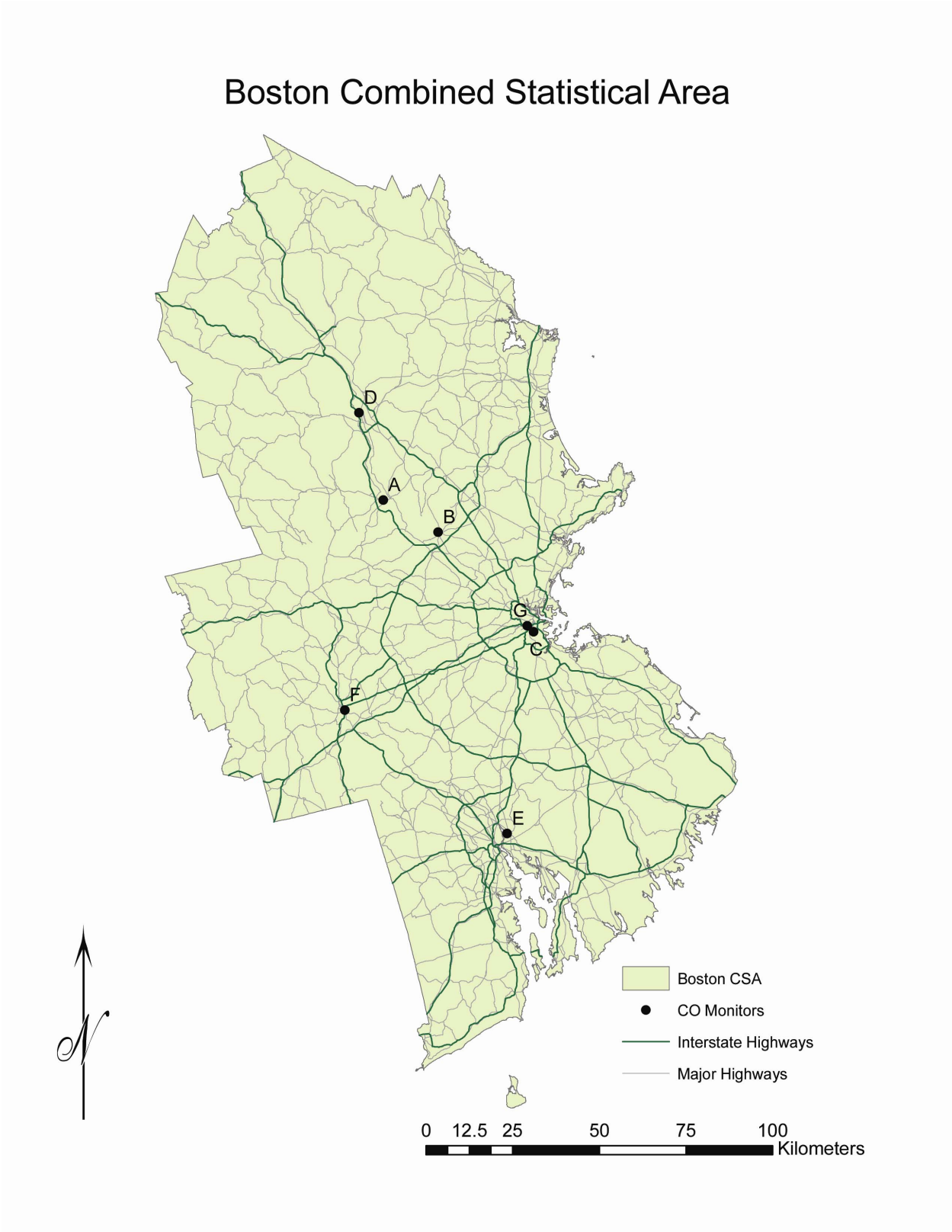


Figure A-30. Map of CO monitor locations with AQS Site IDs for Boston, MA.

Table A-11. Table of inter-sampler comparison statistics, including Pearson r, P90 (ppm), COD, and d (km), as defined in the text, for each pair of hourly CO monitors reporting to AQS in Boston, MA.

		Micro	Neighborhood				Urban	Null
		A	B	C	D	E	F	G
Micro	A	1.00	0.50	0.38	0.49	0.43	0.46	0.35
		0.0	0.6	0.6	0.5	0.6	0.5	0.7
		0.00	0.44	0.46	0.30	0.39	0.25	0.60
		0	18.3	57.5	26.1	102.6	61.5	55.1
Neighborhood	B		1.00	0.50	0.41	0.40	0.49	0.35
			0.0	0.4	0.4	0.4	0.5	0.4
			0.00	0.48	0.41	0.40	0.42	0.58
			0	39.7	41.3	89.1	57.9	37.2
	C			1.00	0.26	0.36	0.37	0.52
				0.0	0.5	0.4	0.5	0.4
				0.00	0.45	0.47	0.45	0.56
				0	80.7	58.7	58.9	2.5
	D				1.00	0.29	0.40	0.27
					0.0	0.4	0.4	0.5
					0.00	0.37	0.28	0.58
					0	128.6	85.8	78.2
	E					1.00	0.34	0.34
						0.0	0.5	0.4
						0.00	0.39	0.55
						0	58.9	60.2
Urban	F						1.00	0.34
							0.0	0.6
							0.00	0.59
							0	58.0
Null	G							1.00
								0.0
								0.00
								0

Legend
r
P90
COD
d

	A	B	C	D	E	F	G
Site ID	33-011-1009	25-017-0007	25-025-0042	33-011-0020	44-007-1010	25-027-0023	25-025-0002
Mean	0.60	0.33	0.36	0.45	0.34	0.53	0.26
SD	0.37	0.22	0.26	0.27	0.22	0.23	0.24
Obs	25869	24362	24260	25197	23707	24446	24134

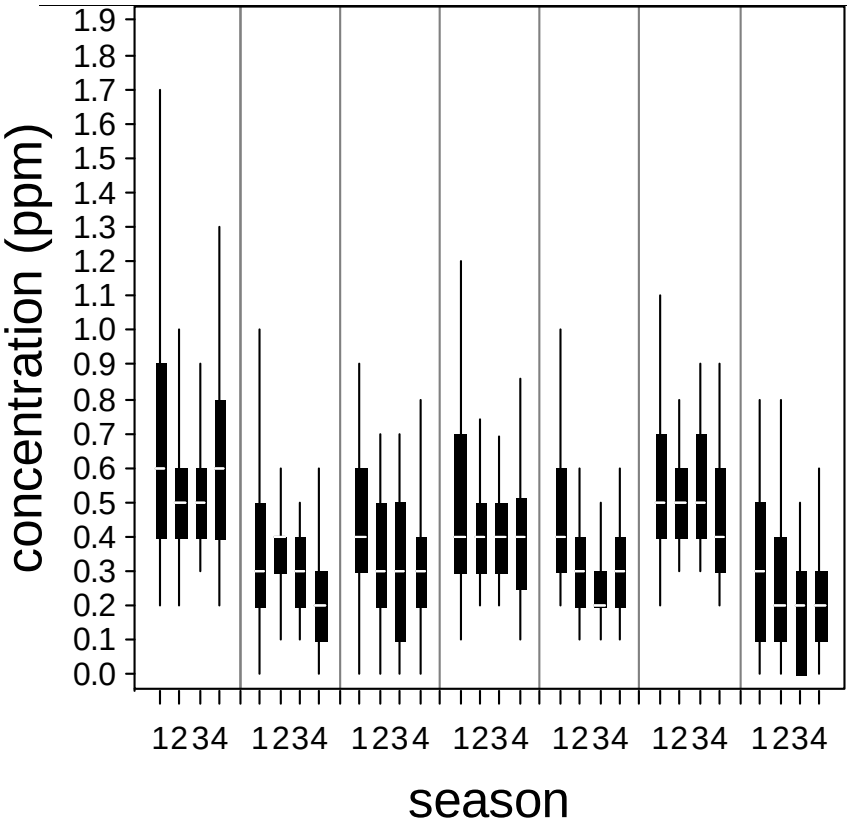


Figure A-31. Box plots illustrating the seasonal distribution of hourly CO concentrations in Boston, MA. Note: 1 = winter, 2 = spring, 3 = summer, and 4 = fall on the x-axis.

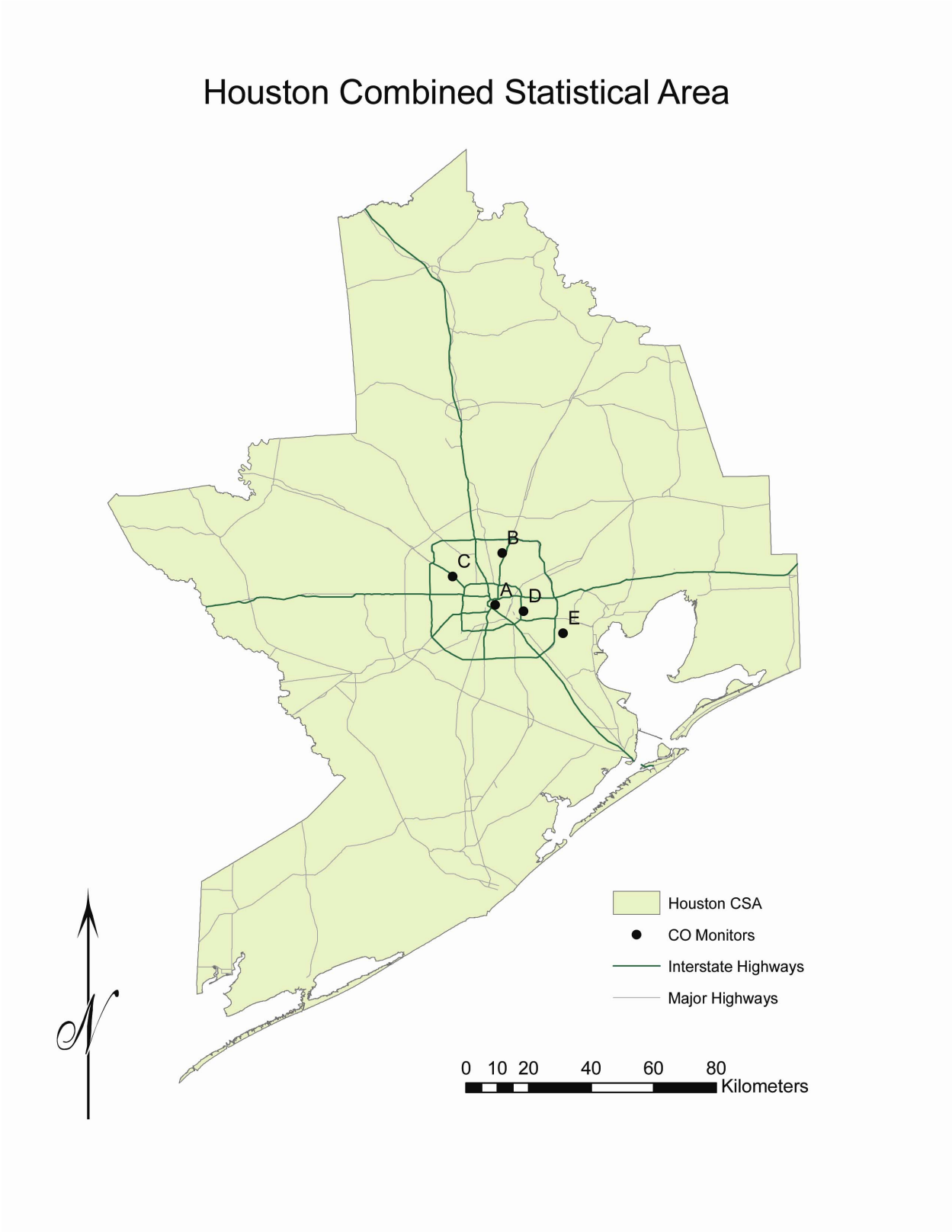


Figure A-32. Map of CO monitor locations with AQS Site IDs for Houston, TX.

Table A-12. Table of inter-sampler comparison statistics, including Pearson r, P90 (ppm), COD, and d (km), as defined in the text, for each pair of hourly CO monitors reporting to AQS in Houston, TX.

		Micro	Neighborhood			
		A	B	C	D	E
		1.00	0.45	0.56	0.53	0.43
Micro	A	0.0	0.4	0.4	0.5	0.4
		0.00	0.47	0.47	0.74	0.47
		0.0	16.7	16.3	9.3	23.5
			1.00	0.72	0.56	0.68
Neighborhood	B		0.0	0.3	0.5	0.3
			0.00	0.29	0.73	0.24
			0.0	17.5	19.8	32.2
				1.00	0.65	0.63
	C			0.0	0.5	0.4
				0.00	0.73	0.29
				0.0	25.2	39.7
					1.00	0.57
	D				0.0	0.4
					0.00	0.72
		Legend			0.0	14.5
		r				1.00
	E	P90				0.0
		COD				0.00
		d				0.0

	A	B	C	D	E
Site ID	48-201-0075	48-201-0024	48-201-0047	48-201-1035	48-201-1039
Mean	0.35	0.42	0.39	0.14	0.33
SD	0.26	0.27	0.33	0.22	0.16
Obs	24922	23997	25241	25285	24480

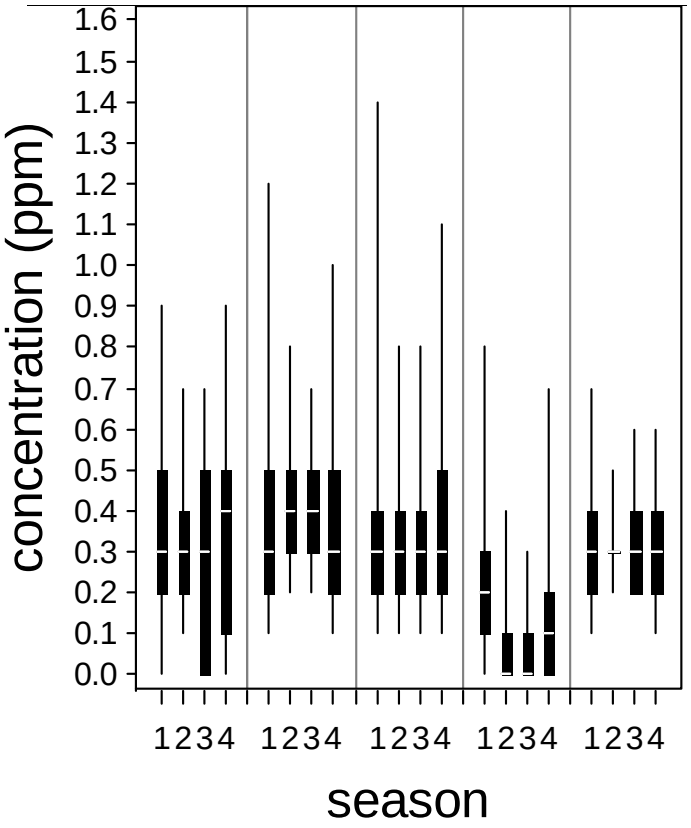


Figure A-33. Box plots illustrating the seasonal distribution of hourly CO concentrations in Houston, TX. Note: 1 = winter, 2 = spring, 3 = summer, and 4 = fall on the x-axis.

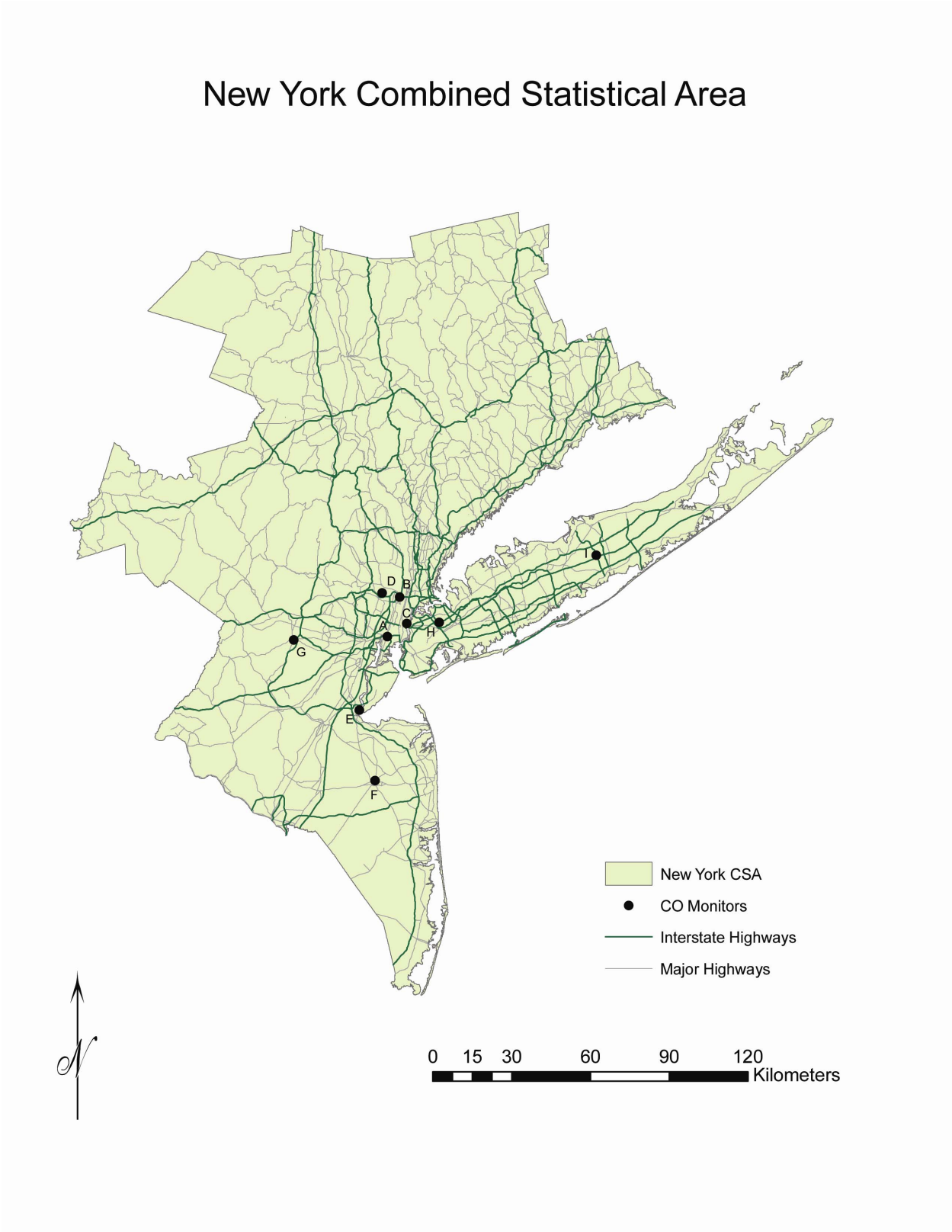


Figure A-34. Map of CO monitor locations with AQS Site IDs for New York City, NY.

Table A-13. Table of inter-sampler comparison statistics, including Pearson r, P90 (ppm), COD, and d (km), as defined in the text, for each pair of hourly CO monitors reporting to AQS in New York City, NY.

		Micro	Middle		Neighborhood	Null				
		A	B	C	D	E	F	G	H	I
Micro	A	1.00	0.65	0.52	0.64	0.54	0.32	0.48	0.43	0.31
		0.0	0.7	0.7	0.8	0.9	0.9	0.9	0.9	1.3
		0.00	0.28	0.24	0.29	0.35	0.34	0.34	0.35	0.81
		0	15.9	8.9	16.8	29.9	55.0	35.7	20.5	85.5
Middle	B		1.00	0.56	0.58	0.55	0.40	0.56	0.41	0.30
			0.0	0.4	0.4	0.4	0.4	0.4	0.5	0.8
			0.00	0.23	0.22	0.25	0.25	0.24	0.28	0.75
			0	10.5	7.0	45.8	70.6	43.7	17.8	76.5
	C			1.00	0.54	0.41	0.33	0.41	0.46	0.29
				0.0	0.4	0.4	0.4	0.4	0.4	0.7
				0.00	0.23	0.28	0.25	0.26	0.26	0.77
				0	15.0	37.5	61.0	43.6	12.3	76.8
Neighborhood	D				1.00	0.55	0.35	0.54	0.59	0.49
					0.0	0.4	0.5	0.4	0.4	0.7
					0.00	0.23	0.26	0.23	0.23	0.74
					0	45.4	71.5	38.1	24.5	82.9
Null	E					1.00	0.50	0.57	0.46	0.33
						0.0	0.4	0.4	0.4	0.7
						0.00	0.24	0.23	0.27	0.72
						0	27.5	36.7	45.1	107.8
	F						1.00	0.47	0.33	0.32
							0.0	0.4	0.4	0.6
							0.00	0.23	0.27	0.73
							0	61.9	65.0	120.3
	G			Legend				1.00	0.34	0.31
				r				0.0	0.4	0.7
				P90				0.00	0.27	0.72
				COD				0	55.8	119.7
	H			d					1.00	0.43
									0.0	0.6
									0.00	0.73
									0	65.1
	I									1.00
										0.0
										0.00
										0

	A	B	C	D	E	F	G	H	I
Site ID	34-017-1002	34-003-0004	36-061-0056	34-003-5001	34-023-2003	34-025-2001	34-027-0003	36-081-0124	36-103-0009
Mean	0.85	0.55	0.62	0.52	0.48	0.50	0.49	0.47	0.12
SD	0.43	0.27	0.21	0.30	0.27	0.24	0.25	0.23	0.17
Obs	25646	23113	25547	25150	25028	25727	25691	25022	25749

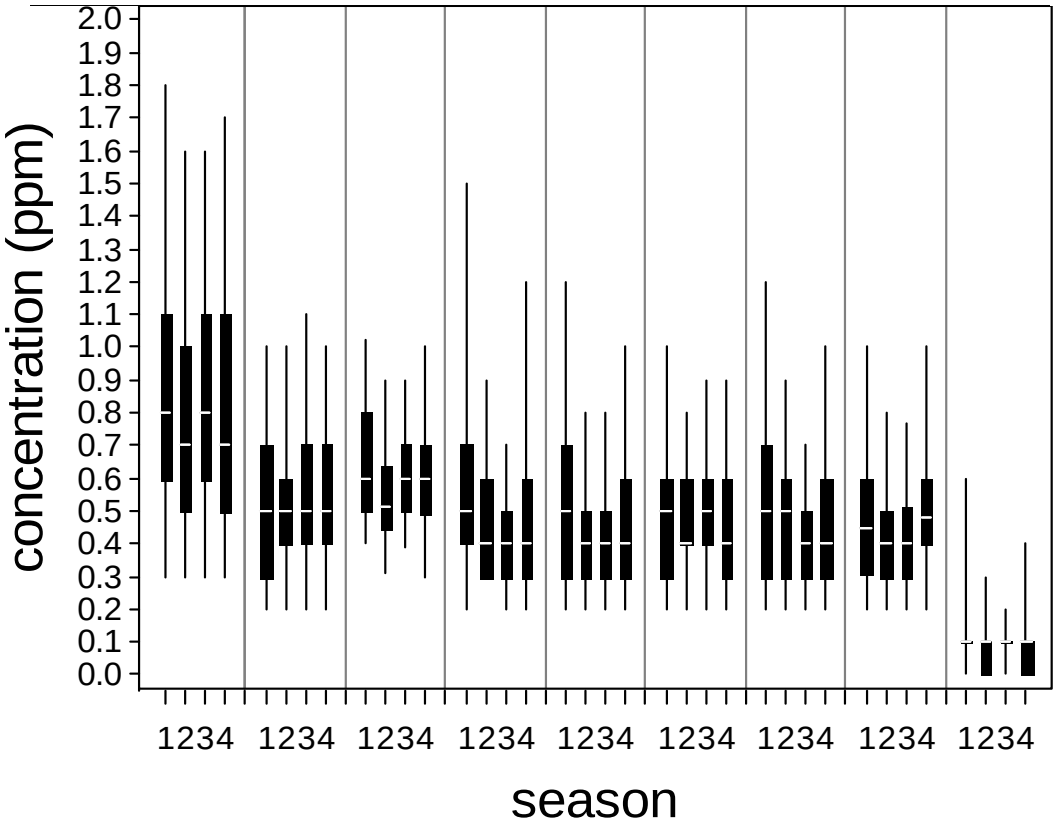


Figure A-35. Box plots illustrating the seasonal distribution of hourly CO concentrations in New York City, NY. Note: 1 = winter, 2 = spring, 3 = summer, and 4 = fall on the x-axis.

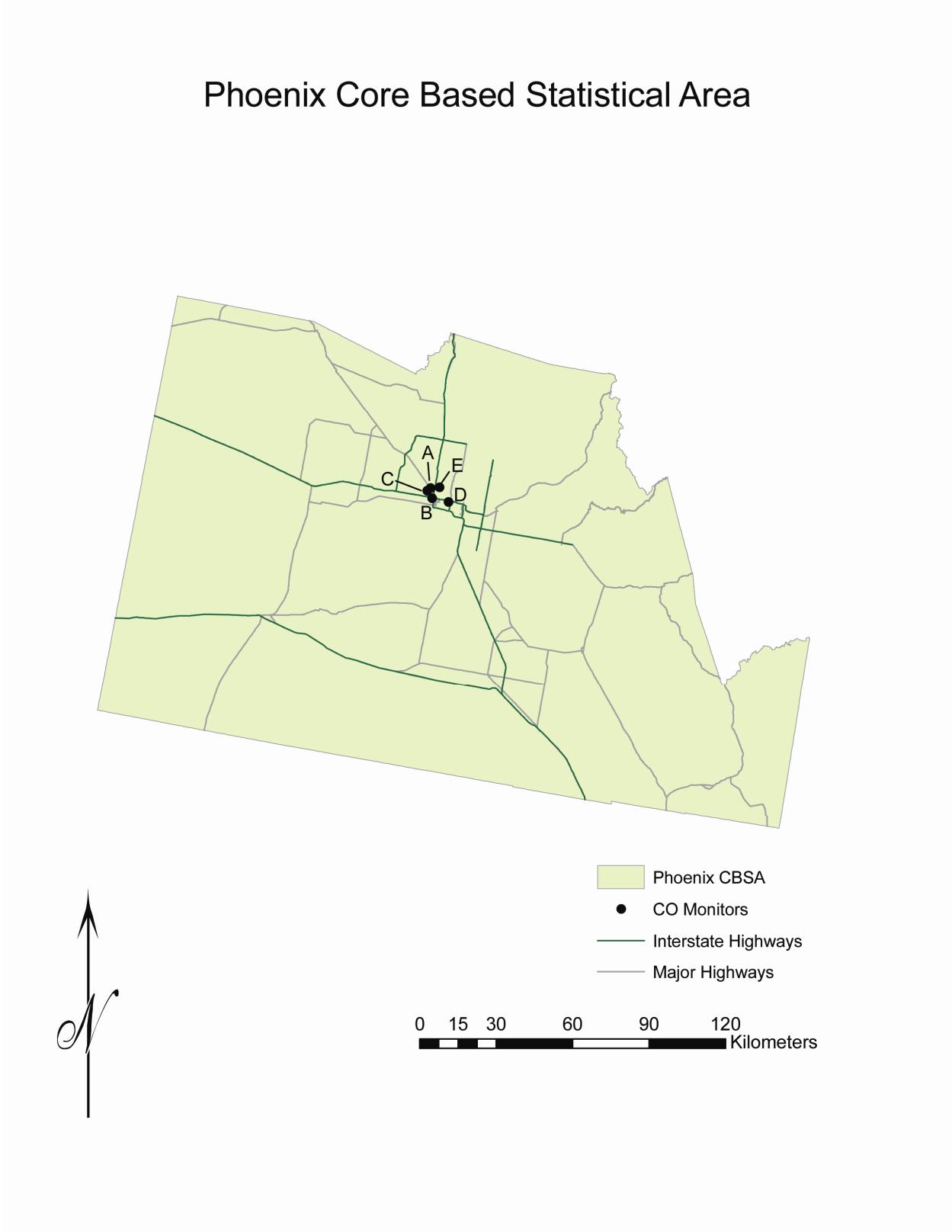


Figure A-36. Map of CO monitor locations with AQS Site IDs for Phoenix, AZ.

Table A-14. Table of inter-sampler comparison statistics, including Pearson r, P90 (ppm), COD, and d (km), as defined in the text, for each pair of hourly CO monitors reporting to AQS in Phoenix, AZ.

		Micro	Middle	Neighborhood		Null
		A	B	C	D	E
Micro	A	1.00	0.86	0.89	0.80	0.84
		0.0	0.8	0.7	1.1	0.9
		0.00	0.39	0.37	0.43	0.37
		0.0	3.9	1.6	8.9	3.5
Middle	B		1.00	0.88	0.81	0.83
			0.0	0.6	0.7	0.6
			0.00	0.34	0.41	0.33
			0.0	3.4	6.6	5.2
Neighborhood	C			1.00	0.81	0.89
				0.0	0.9	0.7
				0.00	0.38	0.24
		Legend		0.0	9.4	4.9
	D	r			1.00	0.85
		P90			0.0	0.6
		COD			0.00	0.36
		d			0.0	6.8
Null	E					1.00
						0.0
						0.00
						0.0

	A	B	C	D	E
Site ID	04-013-0016	04-013-3010	04-013-0019	04-013-3002	04-013-9997
Mean	0.93	0.76	0.84	0.58	0.79
SD	0.95	0.72	0.88	0.64	0.64
Obs	25382	25414	25589	25657	25435

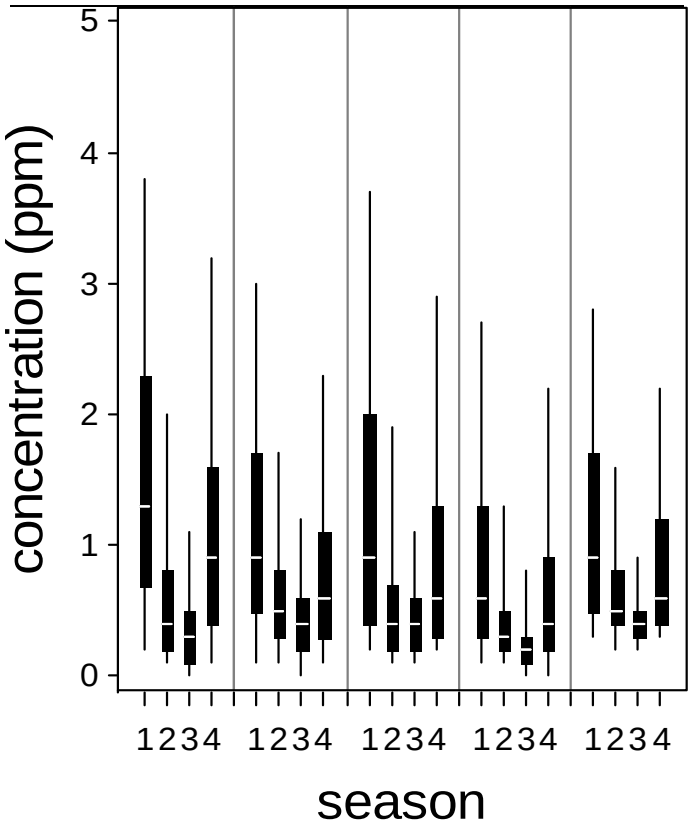


Figure A-37. Box plots illustrating the seasonal distribution of hourly CO concentrations in Phoenix, AZ. Note: 1 = winter, 2 = spring, 3 = summer, and 4 = fall on the x-axis.

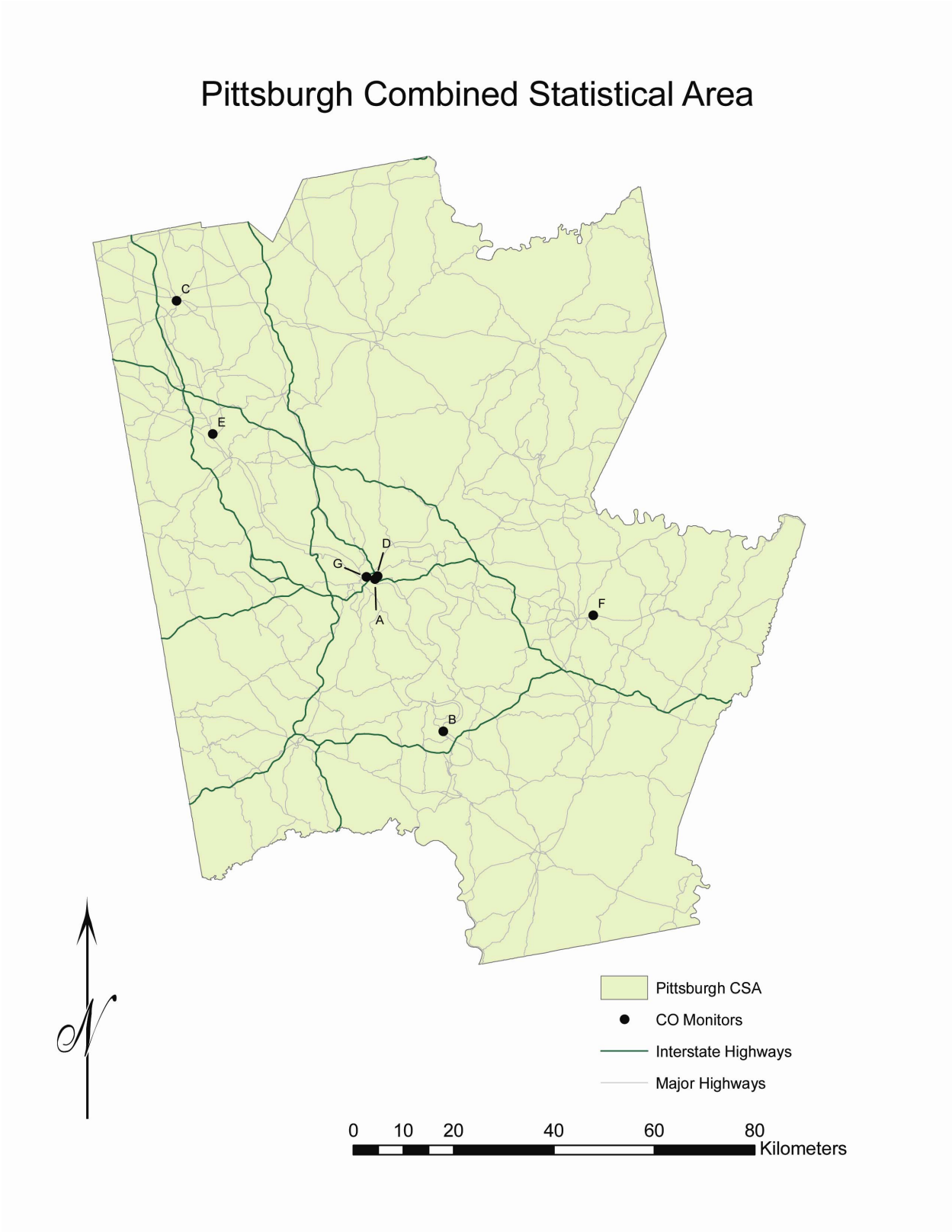


Figure A-38. Map of CO monitor locations with AQS Site IDs for Pittsburgh, PA.

Table A-15. Table of inter-sampler comparison statistics, including Pearson r, P90 (ppm), COD, and d (km), as defined in the text, for each pair of hourly CO monitors reporting to AQS in Pittsburgh, PA.

		Middle	Neighborhood			Urban		
		A	B	C	D	E	F	G
Middle	A	1.00	0.25	0.39	0.73	0.20	0.30	0.43
		0.0	0.7	0.6	0.4	0.7	0.8	0.6
		0.00	0.65	0.51	0.39	0.56	0.88	0.68
		0	33.3	68.2	0.7	43.4	44.1	1.8
Neighborhood	B		1.00	0.26	0.29	0.09	0.09	0.42
			0.0	0.5	0.5	0.6	0.5	0.5
			0.00	0.68	0.62	0.69	0.90	0.73
			0	101.0	33.6	75.0	37.8	34.4
	C			1.00	0.42	0.16	0.21	0.11
				0.0	0.4	0.6	0.6	0.6
				0.00	0.51	0.57	0.87	0.72
				0	68.0	27.5	104.1	66.8
	D				1.00	0.30	0.35	0.52
					0.0	0.5	0.5	0.5
					0.00	0.54	0.86	0.69
					0	43.4	43.7	2.2
Urban	E					1.00	0.02	0.05
						0.0	0.7	0.7
						0.00	0.87	0.74
						0	84.1	41.9
	F						1.00	0.18
							0.0	0.7
							0.00	0.88
			Legend				0	45.8
	G		r					1.00
			P90					0.0
			COD					0.00
			d					0

	A	B	C	D	E	F	G
SiteID	42-003-0038	42-125-0005	42-073-0015	42-003-0031	42-007-0014	42-129-0008	42-003-0010
Mean	0.47	0.21	0.32	0.32	0.28	0.07	0.28
SD	0.33	0.23	0.26	0.26	0.27	0.15	0.32
Obs	25818	25319	25745	25936	25500	25785	25655

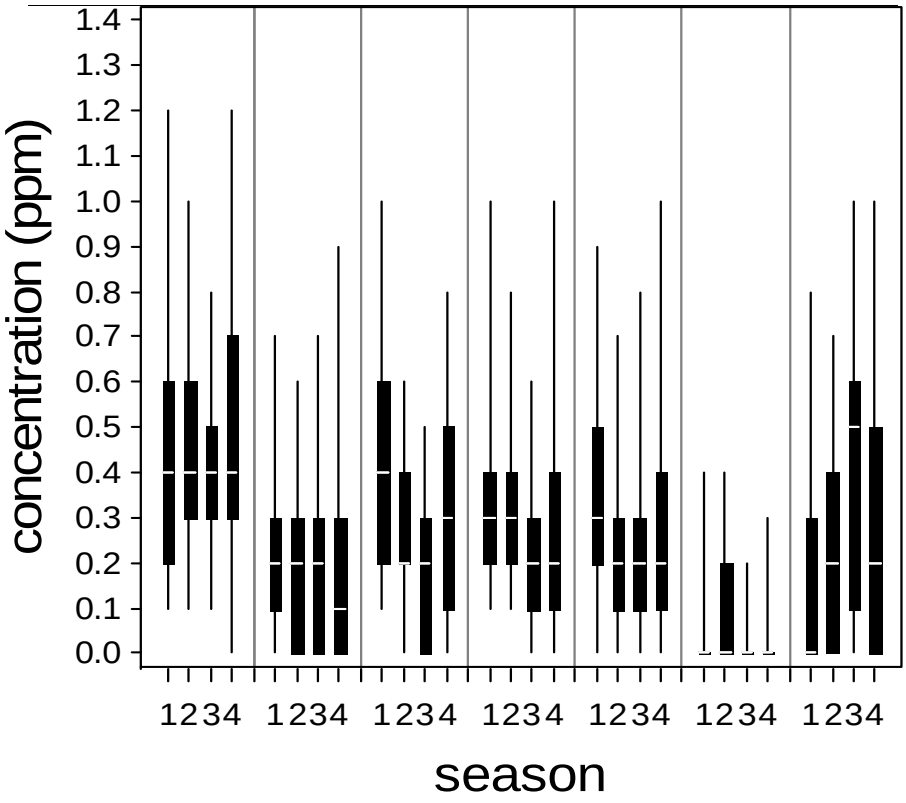


Figure A-39. Box plots illustrating the seasonal distribution of hourly CO concentrations in Pittsburgh, PA. Note: 1 = winter, 2 = spring, 3 = summer, and 4 = fall on the x-axis.

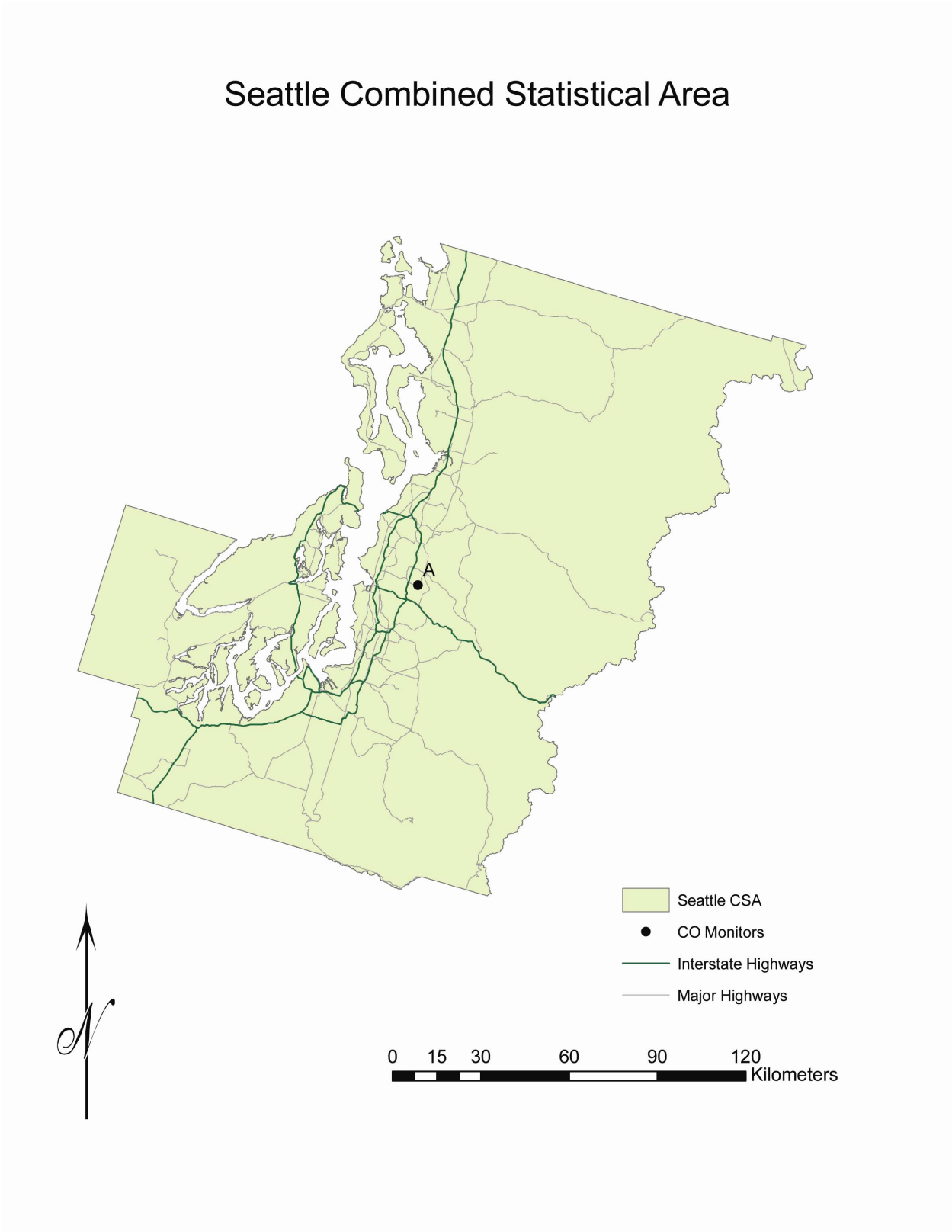


Figure A-40. Map of CO monitor locations with AQS Site IDs for Seattle, WA.

	A
Site ID	53-033-0019
Mean	0.75
SD	0.49
Obs	25818

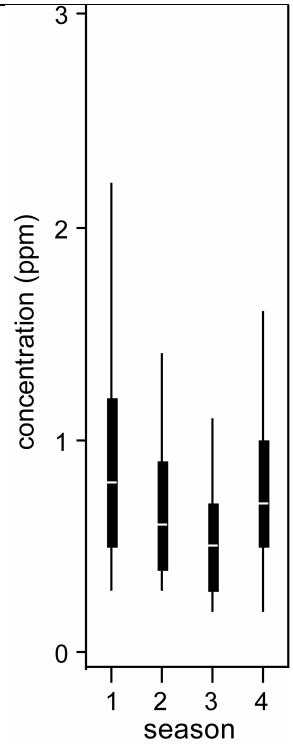


Figure A-41. Box plots illustrating the seasonal distribution of hourly CO concentrations in Seattle, WA. Note: 1 = winter, 2 = spring, 3 = summer, and 4 = fall on the x-axis.

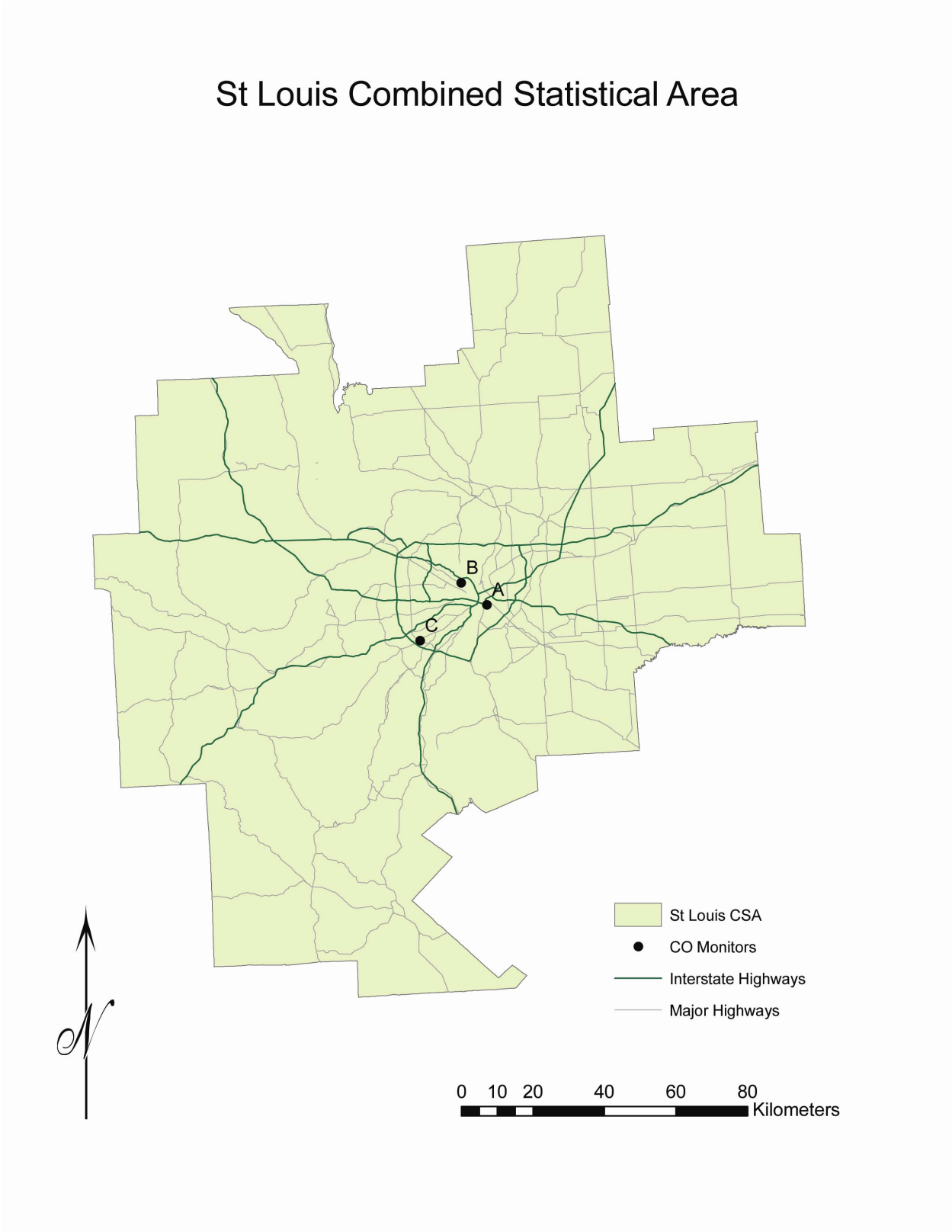


Figure A-42. Map of CO monitor locations with AQS Site IDs for St. Louis, MO.

Table A-16. Table of inter-sampler comparison statistics, including Pearson r, P90 (ppm), COD, and d (km), as defined in the text, for each pair of hourly CO monitors reporting to AQS in St. Louis, MO.

		Neighborhood		Null
		A	B	C
Neighborhood	A	1.00	0.60	0.19
		0.0	0.3	0.5
		0.00	0.24	0.40
		0	9.5	21.2
	B		1.00	0.19
			0.0	0.5
			0.00	0.42
			0	19.8
Null	C			1.00
				0.0
				0.00
				0

Legend	
r	
P90	
COD	
d	

	A	B	C
Site ID	17-163-0010	29-510-0086	29-189-0004
Mean	0.44	0.42	0.43
SD	0.25	0.29	0.25
Obs	25325	25938	25879

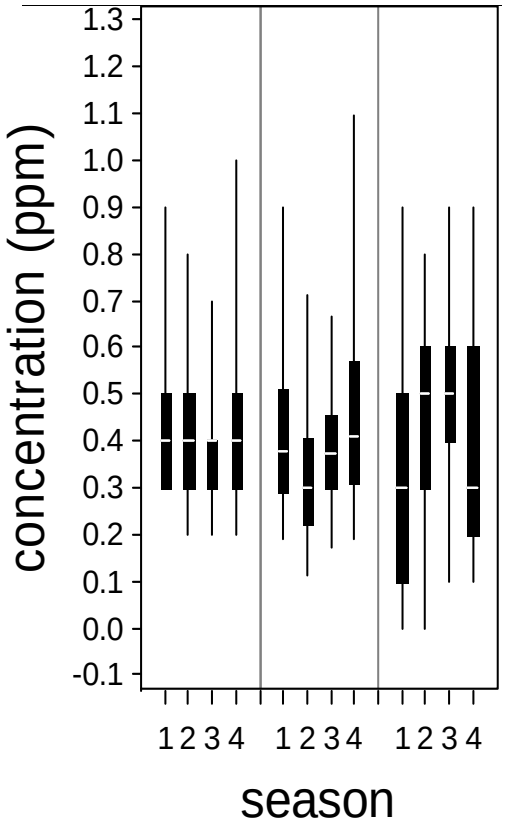


Figure A-43. Box plots illustrating the seasonal distribution of hourly CO concentrations in St. Louis, MO. Note: 1 = winter, 2 = spring, 3 = summer, and 4 = fall on the x-axis.

Table A-17. Comparison of distributional data at different monitoring scales for hourly, 1-h daily max, 24-h avg, and 8-h daily max data for Atlanta, GA.

				PERCENTILES									
Time Scale	**N**	**Mean**	**Min**	**1**	**5**	**10**	**25**	**50**	**75**	**90**	**95**	**99**	**max**
ALL HOURLY													
Microscale	25,440	0.6	0.0	0.2	0.2	0.3	0.4	0.4	0.5	0.7	0.7	1.0	1.2
Urban Scale	51,243	0.4	0.0	0.0	0.1	0.2	0.3	0.3	0.3	0.4	0.5	0.7	1.0
1-H DAILY MAX													
Microscale	1,075	1.0	0.2	0.3	0.4	0.6	0.7	0.8	1.0	1.2	1.2	1.6	1.9
Urban Scale	2,154	0.7	0.0	0.2	0.2	0.3	0.3	0.4	0.5	0.8	0.9	1.3	1.5
1-H DAILY AVG													
Microscale	1,075	0.6	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.6	0.7	0.8	1.0
Urban Scale	2,154	0.4	0.0	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.7	0.9
8-H DAILY MAX													
Microscale	1,075	0.8	0.3	0.3	0.3	0.4	0.5	0.6	0.7	0.9	0.9	1.2	1.3
Urban Scale	2,154	0.5	0.0	0.1	0.2	0.3	0.3	0.3	0.4	0.6	0.7	1.0	1.3

Table A-18. Comparison of distributional data at different monitoring scales for hourly, 1-h daily max, 24-h avg, and 8-h daily max data for Boston, MA.

				PERCENTILES									
Time Scale	**N**	**Mean**	**Min**	**1**	**5**	**10**	**25**	**50**	**75**	**90**	**95**	**99**	**max**
ALL HOURLY													
Microscale	25,869	0.6	0.0	0.1	0.2	0.3	0.4	0.4	0.5	0.7	0.7	1.0	1.2
Neighborhood Scale	97,526	0.4	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.4	0.5	0.6	0.8
Urban Scale	24,446	0.5	0.0	0.1	0.3	0.3	0.4	0.4	0.5	0.6	0.6	0.8	0.9
1-H DAILY MAX													
Microscale	1,080	1.2	0.2	0.4	0.5	0.6	0.7	0.8	0.9	1.2	1.4	2.0	2.5
Neighborhood Scale	4,212	0.6	0.0	0.1	0.2	0.3	0.4	0.4	0.5	0.7	0.7	1.1	1.4
Urban Scale	1,086	0.8	0.0	0.3	0.4	0.5	0.6	0.6	0.8	0.9	1.0	1.2	1.4
1-H DAILY AVG													
Microscale	1,080	0.6	0.1	0.2	0.3	0.3	0.4	0.5	0.6	0.7	0.7	0.9	1.1
Neighborhood Scale	4,212	0.4	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.4	0.5	0.6	0.7
Urban Scale	1,086	0.5	0.0	0.1	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.8
8-H DAILY MAX													
Microscale	1,080	0.8	0.3	0.3	0.3	0.4	0.6	0.6	0.7	0.9	1.0	1.4	1.7
Neighborhood Scale	4,212	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.6	0.8	1.0
Urban Scale	1,086	0.7	0.3	0.3	0.3	0.3	0.5	0.5	0.6	0.8	0.8	1.0	1.1

Table A-19. Comparison of distributional data at different monitoring scales for hourly, 1-h daily max, 24-h avg, and 8-h daily max data for Denver, CO.

				PERCENTILES									
Time Scale	**N**	**Mean**	**Min**	**1**	**5**	**10**	**25**	**50**	**75**	**90**	**95**	**99**	**max**
ALL HOURLY													
Microscale	77,070	0.5	0.0	0.0	0.1	0.1	0.3	0.3	0.4	0.6	0.7	1.0	1.3
Neighborhood Scale	51,968	0.5	0.0	0.0	0.1	0.2	0.3	0.3	0.4	0.6	0.6	1.0	1.3
1-H DAILY MAX													
Microscale	3,190	1.2	0.1	0.3	0.4	0.5	0.7	0.8	1.0	1.4	1.5	2.2	2.7
Neighborhood Scale	2,173	1.1	0.1	0.2	0.3	0.4	0.6	0.6	0.9	1.3	1.5	2.1	2.6
1-H DAILY AVG													
Microscale	3,190	0.5	0.0	0.1	0.2	0.2	0.3	0.4	0.5	0.6	0.6	0.9	1.0
Neighborhood Scale	2,173	0.5	0.0	0.1	0.2	0.3	0.3	0.4	0.5	0.6	0.6	0.9	1.1
8-H DAILY MAX													
Microscale	3,190	0.8	0.3	0.3	0.3	0.4	0.5	0.5	0.7	0.9	1.0	1.4	1.8
Neighborhood Scale	2,173	0.8	0.3	0.3	0.3	0.3	0.4	0.5	0.7	0.9	1.0	1.5	1.8

Table A-20. Comparison of distributional data at different monitoring scales for hourly, 1-h daily max, 24-h avg, and 8-h daily max data for Houston, TX.

				PERCENTILES									
Time Scale	**N**	**Mean**	**Min**	**1**	**5**	**10**	**25**	**50**	**75**	**90**	**95**	**99**	**max**
ALL HOURLY													
Microscale	24,922	0.3	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.4	0.5	0.6	0.8
Neighborhood Scale	99,003	0.3	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.4	0.4	0.6	0.8
1-H DAILY MAX													
Microscale	1,043	0.7	0.0	0.0	0.2	0.3	0.4	0.5	0.6	0.8	0.9	1.2	1.4
Neighborhood Scale	4,145	0.7	0.0	0.0	0.1	0.2	0.4	0.4	0.5	0.8	0.8	1.3	1.7
1-H DAILY AVG													
Microscale	1,043	0.3	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.5	0.6	0.6
Neighborhood Scale	4,145	0.3	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.4	0.4	0.5	0.6
8-H DAILY MAX													
Microscale	1,043	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.6	0.8	1.0
Neighborhood Scale	4,145	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.6	0.9	1.1

Table A-21. Comparison of distributional data at different monitoring scales for hourly, 1-h daily max, 24-h avg, and 8-h daily max data for Los Angeles, CA.

				PERCENTILES									
Time Scale	**N**	**Mean**	**Min**	**1**	**5**	**10**	**25**	**50**	**75**	**90**	**95**	**99**	**max**
ALL HOURLY													
Microscale	24,885	0.7	0.0	0.2	0.3	0.3	0.4	0.4	0.5	0.7	0.8	1.2	1.6
Middle Scale	98,564	0.5	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.6	0.7	1.1	1.6
Neighborhood Scale	49,757	0.3	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.6	0.8
Urban Scale	24,264	0.4	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.4	0.5	1.0	1.4
1-H DAILY MAX													
Microscale	1,080	1.3	0.2	0.4	0.5	0.6	0.8	0.8	1.1	1.6	1.7	2.3	2.7
Middle Scale	4,299	1.2	0.0	0.1	0.1	0.2	0.5	0.6	0.9	1.3	1.5	2.5	3.7
Neighborhood Scale	2,164	0.7	0.0	0.0	0.0	0.1	0.3	0.3	0.5	0.8	0.9	1.3	1.7
Urban Scale	1,053	1.0	0.0	0.1	0.2	0.3	0.4	0.4	0.7	1.3	1.5	2.2	2.6
1-H DAILY AVG													
Microscale	1,080	0.7	0.2	0.3	0.3	0.4	0.5	0.5	0.6	0.7	0.8	1.1	1.2
Middle Scale	4,299	0.5	0.0	0.0	0.0	0.1	0.2	0.2	0.4	0.6	0.7	1.1	1.5
Neighborhood Scale	2,164	0.3	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.4	0.5	0.6
Urban Scale	1,053	0.4	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.5	0.6	0.9	1.1
8-H DAILY MAX													
Microscale	1,080	0.9	0.3	0.3	0.4	0.4	0.6	0.6	0.8	1.1	1.2	1.6	1.8
Middle Scale	4,299	0.8	0.3	0.3	0.3	0.3	0.3	0.3	0.6	0.9	1.0	1.8	2.4
Neighborhood Scale	2,164	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.6	0.9	1.2
Urban Scale	1,053	0.7	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.8	0.9	1.5	1.8

Table A-22. Comparison of distributional data at different monitoring scales for hourly, 1-h daily max, 24-h avg, and 8-h daily max data for New York City, NY.

				PERCENTILES									
Time Scale	**N**	**Mean**	**Min**	**1**	**5**	**10**	**25**	**50**	**75**	**90**	**95**	**99**	**max**
ALL HOURLY													
Microscale	25,646	0.8	0.0	0.2	0.3	0.4	0.5	0.6	0.8	1.0	1.1	1.4	1.6
Middle Scale	48,660	0.6	0.0	0.1	0.3	0.3	0.4	0.5	0.6	0.7	0.7	0.9	1.0
Neighborhood Scale	25,150	0.5	0.0	0.2	0.2	0.3	0.3	0.4	0.4	0.6	0.6	0.9	1.1
1-H DAILY MAX													
Microscale	1,077	1.4	0.3	0.4	0.6	0.8	1.0	1.1	1.4	1.7	1.8	2.1	2.4
Middle Scale	2,053	0.9	0.2	0.4	0.5	0.6	0.7	0.7	0.8	1.0	1.1	1.3	1.5
Neighborhood Scale	1,053	0.9	0.2	0.3	0.4	0.4	0.6	0.6	0.8	1.0	1.1	1.5	1.9
1-H DAILY AVG													
Microscale	1,077	0.8	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1.0	1.0	1.3	1.4
Middle Scale	2,053	0.6	0.0	0.2	0.3	0.4	0.5	0.5	0.6	0.7	0.7	0.8	0.9
Neighborhood Scale	1,053	0.5	0.1	0.2	0.3	0.3	0.4	0.4	0.5	0.6	0.6	0.8	1.0
8-H DAILY MAX													
Microscale	1,077	1.2	0.3	0.4	0.6	0.7	0.9	0.9	1.1	1.4	1.4	1.7	1.9
Middle Scale	2,053	0.7	0.3	0.3	0.4	0.4	0.6	0.6	0.7	0.8	0.9	1.0	1.2
Neighborhood Scale	1,053	0.7	0.3	0.3	0.3	0.3	0.4	0.5	0.6	0.8	0.8	1.2	1.5

Table A-23. Comparison of distributional data at different monitoring scales for hourly, 1-h daily max, 24-h avg, and 8-h daily max data for Phoenix, AZ.

				PERCENTILES									
Time Scale	**N**	**Mean**	**Min**	**1**	**5**	**10**	**25**	**50**	**75**	**90**	**95**	**99**	**max**
ALL HOURLY													
Microscale	25,382	0.9	0.0	0.0	0.1	0.1	0.3	0.3	0.6	1.1	1.3	2.3	3.0
Middle Scale	25,414	0.8	0.0	0.0	0.1	0.1	0.3	0.3	0.5	0.9	1.0	1.8	2.3
Neighborhood Scale	51,246	0.7	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.7	0.8	1.8	2.4
1-H DAILY MAX													
Microscale	1,063	2.2	0.0	0.2	0.5	0.7	1.1	1.2	1.9	2.8	3.1	4.2	4.7
Middle Scale	1,066	1.8	0.1	0.3	0.5	0.7	1.0	1.1	1.6	2.2	2.4	3.2	3.8
Neighborhood Scale	2,156	1.8	0.1	0.2	0.4	0.5	0.8	0.9	1.5	2.3	2.6	3.6	4.2
1-H DAILY AVG													
Microscale	1,063	0.9	0.0	0.0	0.2	0.2	0.4	0.4	0.7	1.2	1.3	2.0	2.3
Middle Scale	1,066	0.8	0.0	0.1	0.2	0.3	0.4	0.5	0.7	0.9	1.0	1.5	1.7
Neighborhood Scale	2,156	0.7	0.0	0.1	0.2	0.2	0.3	0.4	0.5	0.9	0.9	1.5	1.8
8-H DAILY MAX													
Microscale	1,063	1.5	0.3	0.3	0.3	0.4	0.6	0.7	1.2	2.0	2.2	3.1	3.5
Middle Scale	1,066	1.2	0.3	0.3	0.3	0.4	0.7	0.7	1.0	1.5	1.7	2.3	2.7
Neighborhood Scale	2,156	1.2	0.3	0.3	0.3	0.3	0.5	0.6	0.9	1.5	1.7	2.5	3.0

Table A-24. Comparison of distributional data at different monitoring scales for hourly, 1-h daily max, 24-h avg, and 8-h daily max data for Pittsburgh, PA.

				PERCENTILES									
Time Scale	**N**	**Mean**	**Min**	**1**	**5**	**10**	**25**	**50**	**75**	**90**	**95**	**99**	**max**
ALL HOURLY													
Middle Scale	25,818	0.5	0.0	0.0	0.1	0.1	0.3	0.3	0.4	0.5	0.6	0.8	1.1
Neighborhood Scale	77,000	0.3	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6	0.8
Urban Scale	76,940	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.6	0.8
1-H DAILY MAX													
Middle Scale	1,079	0.9	0.0	0.2	0.4	0.4	0.6	0.6	0.8	1.1	1.1	1.6	1.9
Neighborhood Scale	3,210	0.6	0.0	0.0	0.1	0.2	0.3	0.3	0.5	0.7	0.7	1.1	1.3
Urban Scale	3,208	0.4	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.6	0.7	1.0	1.2
1-H DAILY AVG													
Middle Scale	1,079	0.5	0.0	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.8	0.9
Neighborhood Scale	3,210	0.3	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.4	0.6	0.7
Urban Scale	3,208	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.6	0.7
8-H DAILY MAX													
Middle Scale	1,079	0.7	0.3	0.3	0.3	0.3	0.4	0.4	0.6	0.7	0.8	1.1	1.3
Neighborhood Scale	3,210	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.8	1.0
Urban Scale	3,208	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.8	1.0

Table A-25. Comparison of distributional data for hourly, 1-h daily max, 24-h avg, and 8-h daily max data for Seattle, WA. Microscale was the only scale at which monitoring was performed in Seattle, WA.

				PERCENTILES									
Time Scale	**N**	**Mean**	**Min**	**1**	**5**	**10**	**25**	**50**	**75**	**90**	**95**	**99**	**max**
ALL HOURLY													
Microscale	25,818	0.8	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.9	0.9	1.3	1.6
1-H DAILY MAX													
Microscale	1,079	1.5	0.2	0.4	0.5	0.7	0.9	1.0	1.3	1.7	1.8	2.4	2.9
1-H DAILY AVG													
Microscale	1,079	0.8	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.9	0.9	1.2	1.4
8-H DAILY MAX													
Microscale	1,079	1.1	0.3	0.3	0.4	0.5	0.7	0.8	1.0	1.3	1.4	1.8	2.2

Table A-26. Comparison of distributional data for hourly, 1-h daily max, 24-h avg, and 8-h daily max data for St. Louis, MO. Neighborhood scale was the only scale at which monitoring was performed in St. Louis, MO.

				PERCENTILES									
Time Scale	**N**	**Mean**	**Min**	**1**	**5**	**10**	**25**	**50**	**75**	**90**	**95**	**99**	**max**
ALL HOURLY													
Neighborhood Scale	51,263	0.4	0.0	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.6	0.8
1-H DAILY MAX													
Neighborhood Scale	2,138	0.8	0.1	0.2	0.3	0.4	0.5	0.5	0.6	0.9	1.0	1.5	2.0
1-H DAILY AVG													
Neighborhood Scale	2,138	0.4	0.0	0.1	0.2	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.7
8-H DAILY MAX													
Neighborhood Scale	2,138	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.6	0.7	1.0	1.3

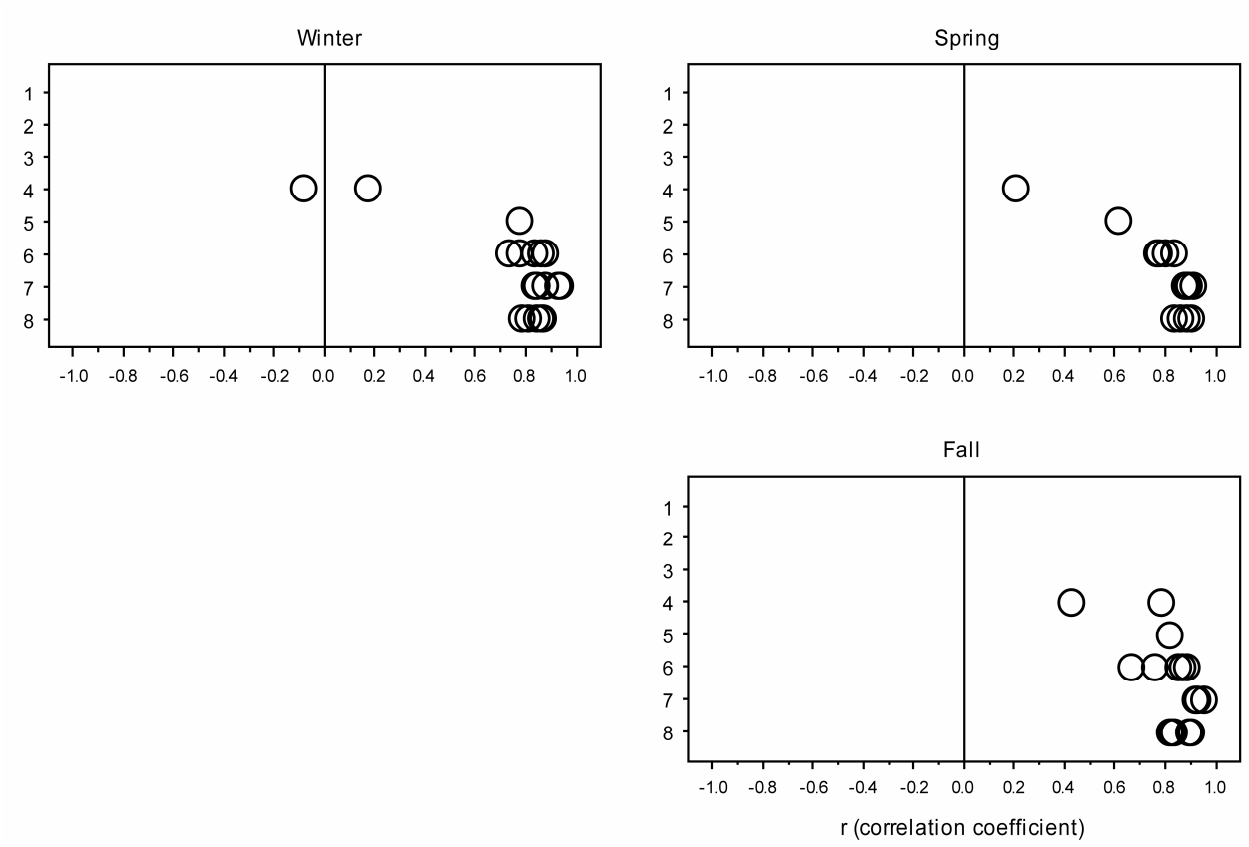


Figure A-44. Seasonal plots of correlations between hourly CO concentration with hourly (1) SO_2, (2) NO_2, (3) O_3, (4) PM_{10}, and (5) $PM_{2.5}$ concentrations for Anchorage, AK. Also shown are correlations between 24-h avg CO concentration with (6) daily max 1-h and (7) daily max 8-h CO concentrations and (8) between daily max 1-h and daily max 8-h CO concentrations. Refer the numbers in this caption to those on the y-axis of each seasonal plot. Note that the data are not obtained for Anchorage during the summer, and so are not presented here.

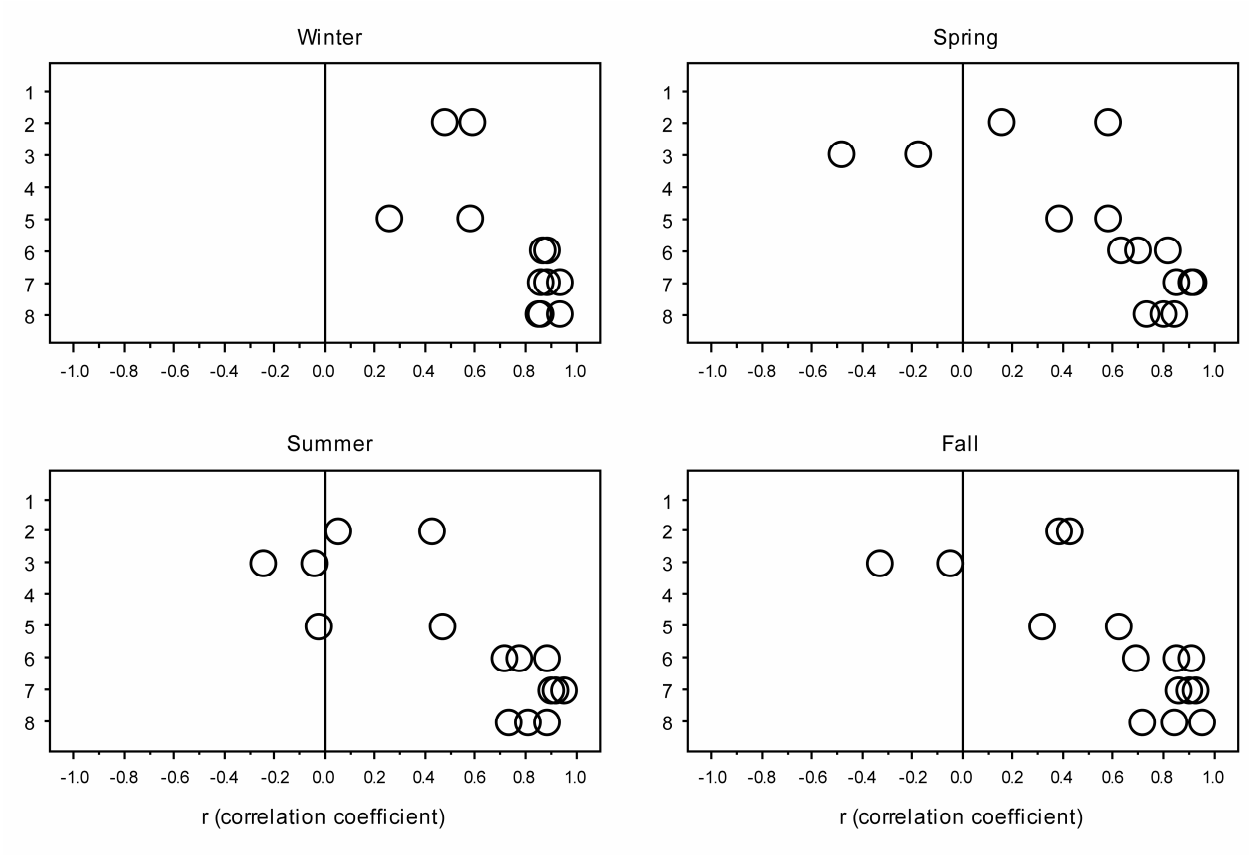


Figure A-45. Seasonal plots of correlations between hourly CO concentration with hourly (1) SO_2, (2) NO_2, (3) O_3, (4) PM_{10}, and (5) $PM_{2.5}$ concentrations for Atlanta, GA. Also shown are correlations between 24-h avg CO concentration with (6) daily max 1-h and (7) daily max 8-h CO concentrations and (8) between daily max 1-h and daily max 8-h CO concentrations. Refer the numbers in this caption to those on the y-axis of each seasonal plot.

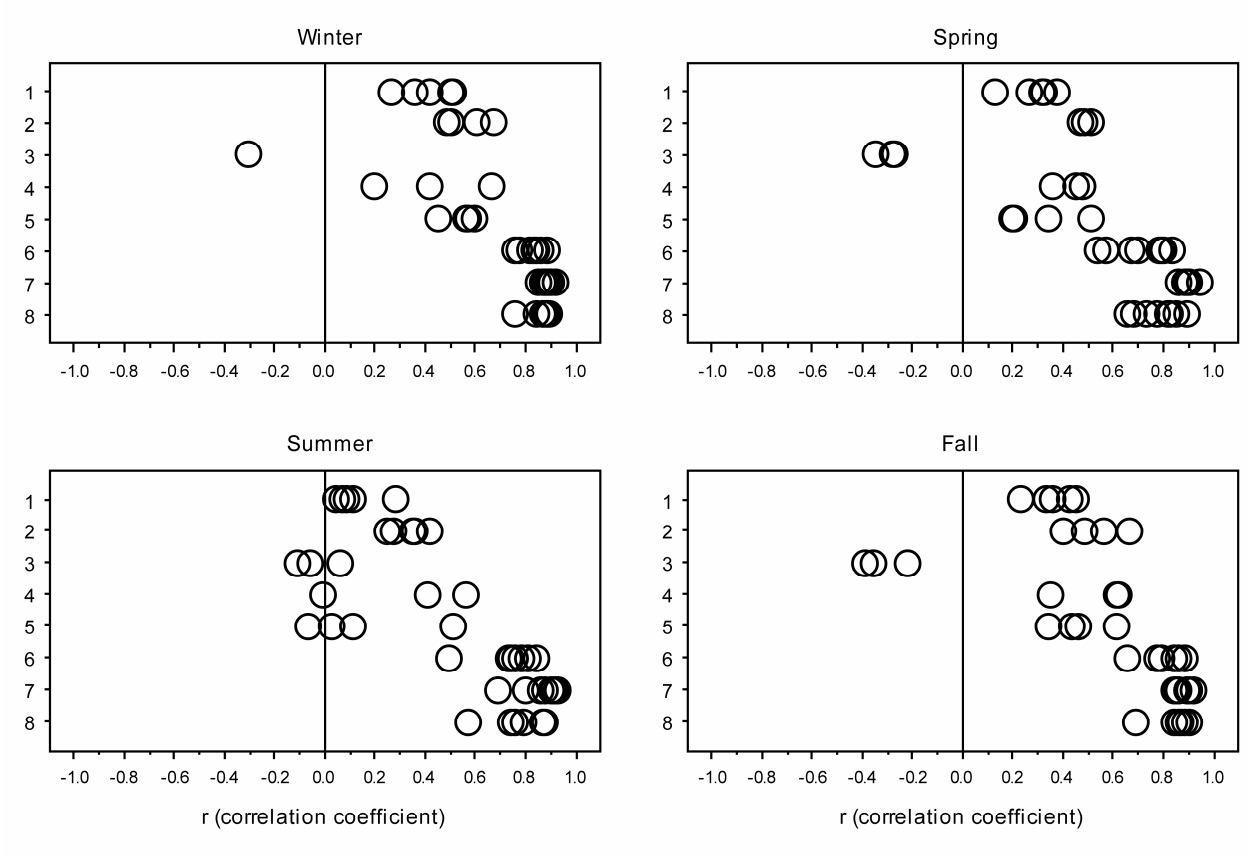


Figure A-46. Seasonal plots of correlations between hourly CO concentration with hourly (1) SO_2, (2) NO_2, (3) O_3, (4) PM_{10}, and (5) $PM_{2.5}$ concentrations for Boston, MA. Also shown are correlations between 24-h avg CO concentration with (6) daily max 1-h and (7) daily max 8-h CO concentrations and (8) between daily max 1-h and daily max 8-h CO concentrations. Refer the numbers in this caption to those on the y-axis of each seasonal plot.

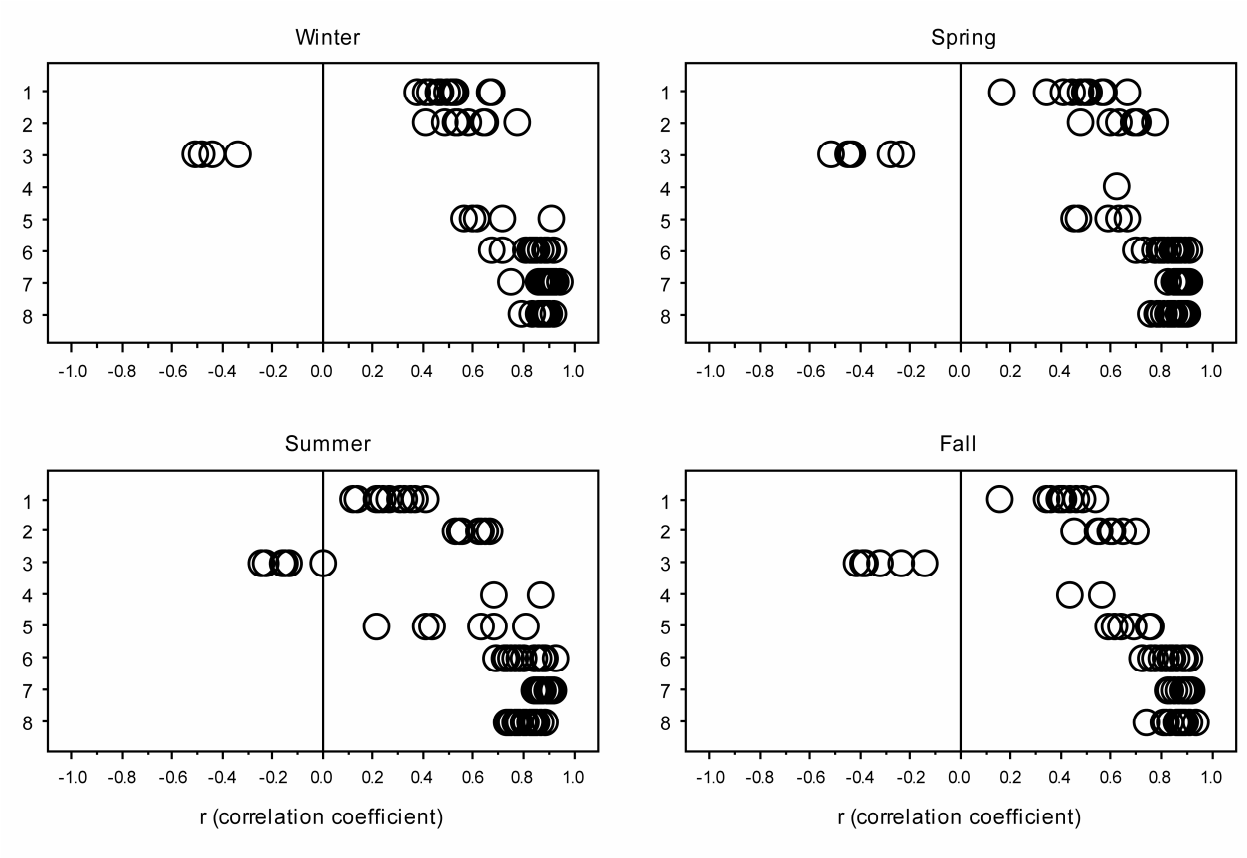


Figure A-47. Seasonal plots of correlations between hourly CO concentration with hourly (1) SO_2, (2) NO_2, (3) O_3, (4) PM_{10}, and (5) $PM_{2.5}$ concentrations for New York City, NY. Also shown are correlations between 24-h avg CO concentration with (6) daily max 1-h and (7) daily max 8-h CO concentrations and (8) between daily max 1-h and daily max 8-h CO concentrations. Refer the numbers in this caption to those on the y-axis of each seasonal plot.

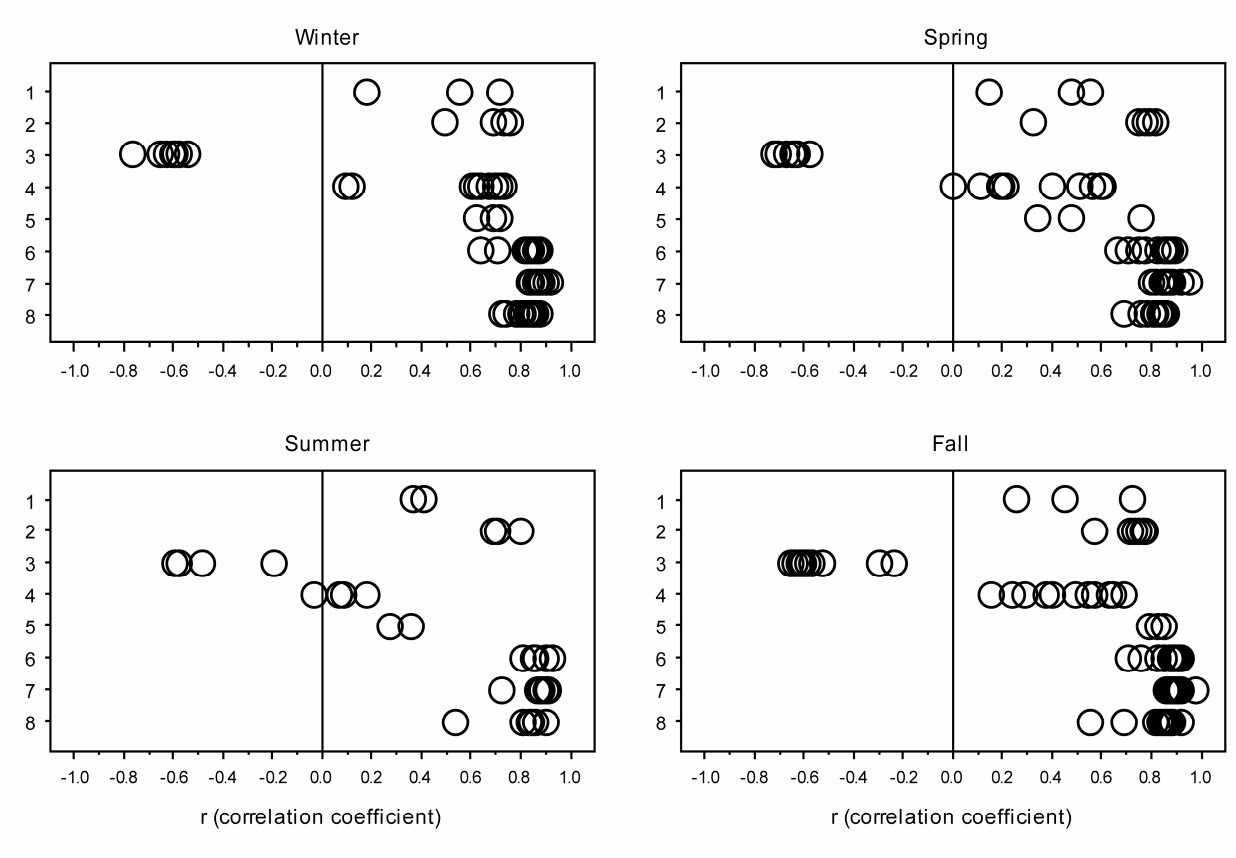


Figure A-48. Seasonal plots of correlations between hourly CO concentration with hourly (1) SO_2, (2) NO_2, (3) O_3, (4) PM_{10}, and (5) $PM_{2.5}$ concentrations for Phoenix, AZ. Also shown are correlations between 24-h avg CO concentration with (6) daily max 1-h and (7) daily max 8-h CO concentrations and (8) between daily max 1-h and daily max 8-h CO concentrations. Refer the numbers in this caption to those on the y-axis of each seasonal plot.

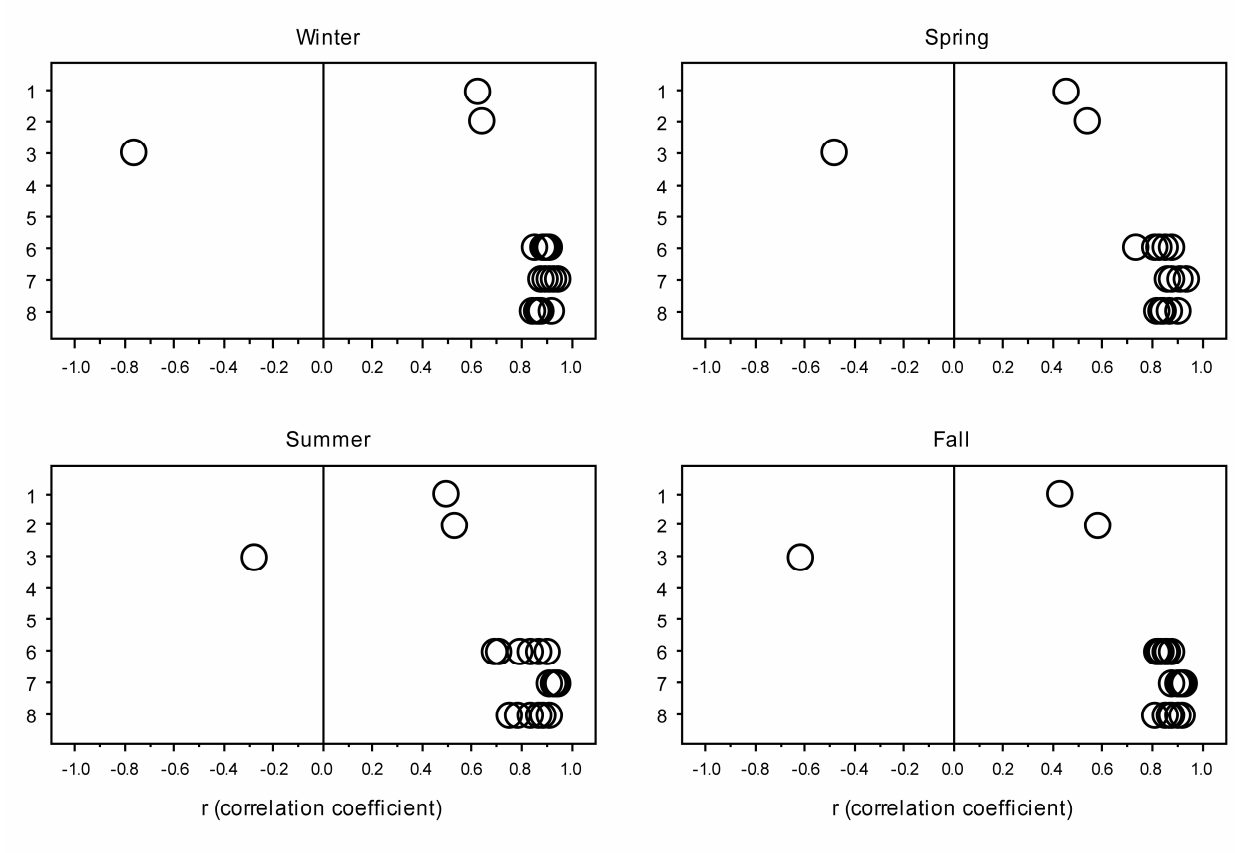


Figure A-49. Seasonal plots of correlations between hourly CO concentration with hourly (1) SO_2, (2) NO_2, (3) O_3, (4) PM_{10}, and (5) $PM_{2.5}$ concentrations for Seattle, WA. Also shown are correlations between 24-h avg CO concentration with (6) daily max 1-h and (7) daily max 8-h CO concentrations and (8) between daily max 1-h and daily max 8-h CO concentrations. Refer the numbers in this caption to those on the y-axis of each seasonal plot.

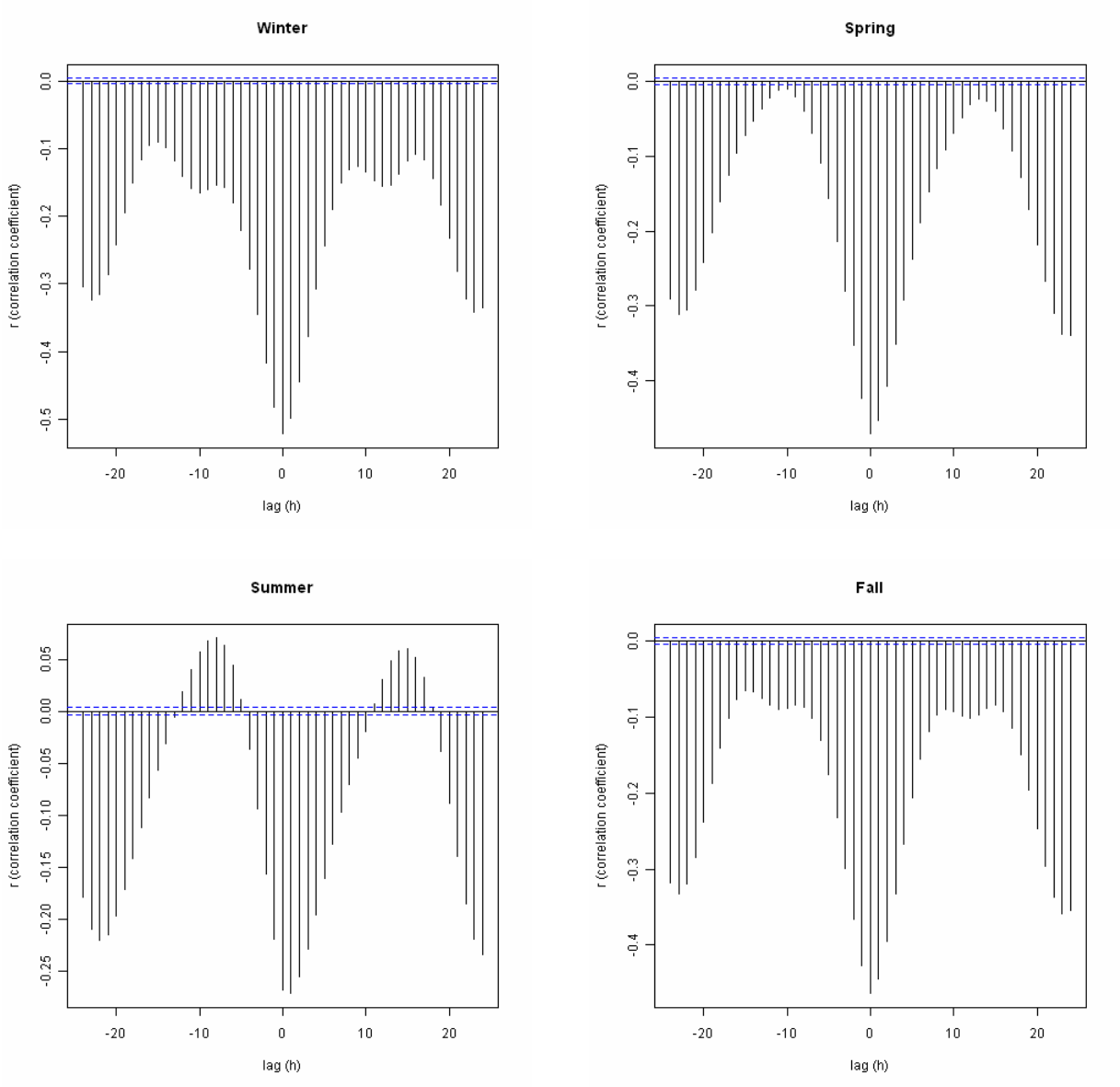


Figure A-50. Cross-correlation functions for each season combined across sites where CO and O_3 monitors were co-located in Atlanta, Boston, Denver, Los Angeles, New York City, and Phoenix.