

# **Appendix C**

## **Mobile Source Emissions Inventory Output Summaries**

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Adjusted VMT and Emissions by HPMS Code for 2002 Base Year 1-Hour Maintenance  
Include Post Processing of Speeds Using MOBILE6  
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		AM Peak	Mid-Day	PM Peak	Night	Total
HPMS Code 1	VMT =	1528639.2	1871869.6	1853201.7	983638.2	6237348.6
	VHT =	28138.1	31296.1	33832.0	15478.8	108745.0
	Average Speed =	54.33	59.81	54.78	63.55	57.36
	VOC =	1725834.8	2080527.8	2088657.7	1084876.6	6979896.9
	NOX =	4614840.7	6040642.4	5609859.9	3398163.3	19663506.2
HPMS Code 2*	VMT =	1001240.8	1040758.2	1293777.5	553603.3	3889379.8
	VHT =	25947.3	24133.2	33617.0	11763.9	95461.3
	Average Speed =	38.59	43.13	38.49	47.06	40.74
	VOC =	1168552.3	1189224.3	1510251.2	627767.9	4495795.7
	NOX =	2701419.6	2966357.5	3483863.0	1633354.2	10784994.3
HPMS Code 6	VMT =	1072773.1	1149644.8	1408609.6	565081.2	4196108.8
	VHT =	29886.8	27901.1	43840.8	12658.1	114286.9
	Average Speed =	35.89	41.20	32.13	44.64	36.72
	VOC =	1329741.5	1373497.4	1807265.7	663053.1	5173557.7
	NOX =	2500199.6	2689846.9	3325708.4	1342327.5	9858082.5
HPMS Code 7	VMT =	1085866.3	1065528.6	1482257.2	503448.8	4137100.9
	VHT =	30546.0	27343.8	42319.6	12248.9	112458.3
	Average Speed =	35.55	38.97	35.03	41.10	36.79
	VOC =	1346449.2	1289092.9	1846341.6	601486.0	5083369.8
	NOX =	2491951.8	2441947.9	3403423.7	1162344.9	9499668.3
HPMS Code 8	VMT =	363812.7	357512.3	520154.4	158568.1	1400047.5
	VHT =	10380.7	9382.9	15715.8	3913.6	39393.0
	Average Speed =	35.05	38.10	33.10	40.52	35.54
	VOC =	452516.5	434624.5	658602.2	190037.7	1735780.9
	NOX =	830139.5	812789.8	1195658.2	363575.0	3202162.4
HPMS Code 9	VMT =	931002.3	984454.4	1420274.2	388795.0	3724525.9
	VHT =	26428.0	27604.0	40734.6	10703.0	105469.6
	Average Speed =	35.23	35.66	34.87	36.33	35.31
	VOC =	1526094.3	1633604.8	2348045.5	638206.1	6145950.8
	NOX =	2163016.2	2292059.7	3302738.6	906924.7	8664739.3
HPMS Code 11	VMT =	9531698.1	12316730.3	11825238.0	5387265.9	39060932.3
	VHT =	242585.7	245749.5	336041.4	90487.4	914864.1
	Average Speed =	39.29	50.12	35.19	59.54	42.70

	VOC =	11506210.8	14112515.6	14666448.8	5989602.2	46274777.5
	NOX =	25862227.3	35219497.6	32151533.5	17238009.5	110471267.9
HPMS Code 12	VMT =	1674091.5	2174578.0	2194692.1	758687.9	6802049.6
	VHT =	38496.0	48468.6	56903.0	13211.8	157079.4
	Average Speed =	43.49	44.87	38.57	57.43	43.30
	VOC =	1987956.6	2571116.0	2678974.6	854089.7	8092136.9
	NOX =	4557094.3	6253659.2	5927591.8	2386609.8	19124955.1
HPMS Code 14	VMT =	2834795.3	3236504.1	3896303.6	1093775.8	11061378.8
	VHT =	89290.6	89245.5	142620.3	26528.3	347684.6
	Average Speed =	31.75	36.27	27.32	41.23	31.81
	VOC =	3639367.8	3995417.0	5273921.4	1305868.9	14214575.2
	NOX =	6706377.7	7623874.6	9383985.1	2616754.1	26330991.6
HPMS Code 16	VMT =	5978755.9	6632831.5	8795162.7	2091056.4	23497806.5
	VHT =	207929.3	203405.2	345592.9	55792.3	812719.7
	Average Speed =	28.75	32.61	25.45	37.48	28.91
	VOC =	7923071.9	8442207.7	12198051.4	2557934.0	31121265.1
	NOX =	14011540.1	15409515.8	20934502.9	4857893.9	55213452.8
HPMS Code 17	VMT =	2106529.9	2267599.9	3351412.3	658007.7	8383549.8
	VHT =	86248.9	83256.5	157174.2	20610.6	347290.1
	Average Speed =	24.42	27.24	21.32	31.93	24.14
	VOC =	2965338.9	3068137.5	4984567.3	845368.4	11863412.1
	NOX =	5007961.5	5304469.7	8136716.8	1511674.5	19960822.5
HPMS Code 19	VMT =	3904993.9	4947178.2	6030802.8	1596766.6	16479741.5
	VHT =	149856.5	181418.1	241108.1	53732.0	626114.7
	Average Speed =	26.06	27.27	25.01	29.72	26.32
	VOC =	6209291.7	7948088.2	9815526.2	2528404.8	26501310.8
	NOX =	9187686.9	11645478.7	14236321.1	3774835.1	38844321.8
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Grand Total	VMT =	32014199.1	38045189.8	44071886.2	14738694.8	128869969.9
	VHT =	965733.8	999204.5	1489499.7	327128.8	3781566.8
	VOC =	41780426.4	48138053.7	59876653.8	17886695.5	167681829.3
	NOX =	80634455.3	98700139.7	111091903.1	41192466.6	331618964.7
	Average Speed =	33.2	38.1	29.6	45.1	34.1
	VOC in tons =					184.8376
	NOX in tons =					365.5473

Note: EPA requirements for facilities designated as Rural Principle Arterials

\* Includes VMT and VHT for facilities re-classified as Rural Principle Arterials

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Adjusted VMT and Emissions by HPMS Code for 2005 Analysis Year for 1-Hour Maintenance SIP  
Include Post Processing of Speeds Using MOBILE6  
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		AM Peak	Mid-Day	PM Peak	Night	Total
HPMS Code 1	VMT =	1618693.2	1999350.6	1979653.0	1082110.7	6679807.5
	VHT =	30280.0	33906.7	37172.4	17105.1	118464.1
	Average Speed =	53.46	58.97	53.26	63.26	56.39
	VOC =	1360241.6	1644913.5	1664116.8	879407.6	5548679.5
	NOX =	3626861.4	4815147.5	4436504.0	2841729.6	15720242.5
HPMS Code 2*	VMT =	1079523.7	1121977.8	1394000.5	615259.2	4210761.2
	VHT =	27912.3	25838.6	36297.2	12898.3	102946.4
	Average Speed =	38.68	43.42	38.41	47.70	40.90
	VOC =	943202.4	953893.0	1220083.7	517659.8	3634838.8
	NOX =	2178844.6	2400230.8	2807356.9	1378958.9	8765391.2
HPMS Code 6	VMT =	1129378.6	1206043.3	1469726.3	590710.9	4395859.0
	VHT =	31152.9	29423.3	43481.4	13335.9	117393.4
	Average Speed =	36.25	40.99	33.80	44.29	37.45
	VOC =	1050523.1	1083733.1	1399966.4	520099.6	4054322.2
	NOX =	2025017.7	2177228.9	2651819.0	1082925.6	7936991.2
HPMS Code 7	VMT =	1186743.5	1164193.8	1612995.9	550076.2	4514009.5
	VHT =	33168.8	30249.0	47931.3	13476.7	124825.8
	Average Speed =	35.78	38.49	33.65	40.82	36.16
	VOC =	1107709.2	1064260.7	1538017.7	494827.0	4204814.6
	NOX =	2091033.1	2055020.6	2861236.2	978826.8	7986116.6
HPMS Code 8	VMT =	404259.2	395021.3	562925.4	176215.0	1538420.9
	VHT =	11756.0	10451.2	17374.5	4355.7	43937.4
	Average Speed =	34.39	37.80	32.40	40.46	35.01
	VOC =	381845.9	362857.8	542558.5	158892.4	1446154.6
	NOX =	712407.7	692104.9	1000653.3	311529.4	2716695.3
HPMS Code 9	VMT =	984948.6	1035166.6	1497749.9	416057.2	3933922.3
	VHT =	27874.9	29001.7	42953.4	11456.1	111286.0
	Average Speed =	35.33	35.69	34.87	36.32	35.35
	VOC =	1224260.6	1304182.8	1878767.9	517117.8	4924329.1
	NOX =	1818938.9	1919092.0	2771222.9	772005.6	7281259.4
HPMS Code 11	VMT =	9759759.3	12370252.8	12266769.6	5510172.3	39906954.0
	VHT =	232421.6	246648.0	334947.9	92651.3	906668.8
	Average Speed =	41.99	50.15	36.62	59.47	44.01
	VOC =	8698294.1	10547172.6	11325289.7	4526501.0	35097257.3
	NOX =	19637989.0	26480360.3	24575073.6	13349396.8	84042819.7

HPMS Code 12	VMT =	1704525.7	2126723.2	2245266.0	758450.9	6834965.8
	VHT =	39424.9	45681.3	56717.0	13245.7	155068.9
	Average Speed =	43.23	46.56	39.59	57.26	44.08
	VOC =	1515771.0	1856771.6	2041041.1	631378.1	6044961.8
	NOX =	3447863.3	4620135.0	4524764.4	1812504.7	14405267.3
HPMS Code 14	VMT =	2883384.0	3251858.2	3900955.7	1117945.0	11154143.0
	VHT =	91124.3	89513.2	137517.5	27234.3	345389.2
	Average Speed =	31.64	36.33	28.37	41.05	32.29
	VOC =	2801283.0	3022456.2	3945594.4	1003214.6	10772548.2
	NOX =	5246758.9	5891221.7	7194182.4	2059343.2	20391506.2
HPMS Code 16	VMT =	5985073.9	6628491.8	8684680.9	2097329.5	23395576.2
	VHT =	206261.3	202161.7	331041.9	56327.5	795792.3
	Average Speed =	29.02	32.79	26.23	37.23	29.40
	VOC =	5989794.3	6358955.5	9042946.0	1934966.8	23326662.5
	NOX =	10791073.9	11851348.1	15873248.1	3755640.8	42271310.8
HPMS Code 17	VMT =	2087625.7	2229798.8	3288176.8	648752.0	8254353.4
	VHT =	83292.8	81039.0	145491.8	20505.8	330329.4
	Average Speed =	25.06	27.52	22.60	31.64	24.99
	VOC =	2209305.8	2278520.7	3648563.3	629822.4	8766212.3
	NOX =	3815163.2	4010651.8	6117687.0	1148675.8	15092177.8
HPMS Code 19	VMT =	4025705.6	5074200.3	6198640.5	1663211.6	16961758.0
	VHT =	148039.2	182322.9	241204.9	56063.0	627630.0
	Average Speed =	27.19	27.83	25.70	29.67	27.03
	VOC =	4854572.6	6185491.4	7653844.4	2002697.2	20696605.8
	NOX =	7473985.5	9451928.3	11561842.3	3117583.0	31605339.2
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Grand Total	VMT =	32849620.9	38603078.7	45101540.5	15226290.6	131780530.7
	VHT =	962708.9	1006236.5	1472131.1	338655.3	3779731.8
	VOC =	32136803.5	36663208.9	45900789.9	13816584.3	128517386.7
	NOX =	62865937.1	76364469.9	86375590.1	32609120.2	258215117.4
	Average Speed =	34.1	38.4	30.6	45.0	34.9
	VOC in tons =					141.6662
NOX in tons =					284.6334	

Note: EPA requirements for facilities designated as Rural Principle Arterials  
 \* Includes VMT and VHT for facilities re-classified as Rural Principle Arterials

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Adjusted VMT and Emissions by HPMS Code for 2010 Analysis Year for 1Hour Maintenance SIP  
Include Post Processing of Speeds Using MOBILE6  
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		AM Peak	Mid-Day	PM Peak	Night	Total
HPMS Code 1	VMT =	1835237.0	2303908.1	2210175.1	1249680.1	7599000.3
	VHT =	36431.2	40303.0	44342.9	19942.8	141019.8
	Average Speed =	50.38	57.16	49.84	62.66	53.89
	VOC =	1133639.5	1388532.6	1367484.3	742901.4	4632557.8
	NOX =	2405569.7	3257570.3	2906073.2	1965282.4	10534495.5
HPMS Code 2*	VMT =	1254018.9	1353786.8	1612024.7	695096.4	4914926.7
	VHT =	33327.9	31635.4	43502.0	14704.0	123169.2
	Average Speed =	37.63	42.79	37.06	47.27	39.90
	VOC =	797653.1	838213.4	1028779.5	425996.8	3090642.8
	NOX =	1543946.0	1762210.2	1974525.7	945920.0	6226601.9
HPMS Code 6	VMT =	1354927.4	1463485.1	1768075.7	682944.9	5269433.1
	VHT =	38750.7	35921.2	53275.5	15575.9	143523.3
	Average Speed =	34.97	40.74	33.19	43.85	36.71
	VOC =	913645.5	948370.9	1210964.6	434990.6	3507971.5
	NOX =	1507786.9	1633278.4	1975608.3	775509.4	5892183.1
HPMS Code 7	VMT =	1420763.1	1421977.1	1932745.6	643189.9	5418675.6
	VHT =	41228.4	38045.7	58877.3	15928.3	154079.7
	Average Speed =	34.46	37.38	32.83	40.38	35.17
	VOC =	961382.0	941507.6	1328351.2	417855.5	3649096.3
	NOX =	1560338.5	1559541.0	2135566.7	710649.5	5966095.7
HPMS Code 8	VMT =	489657.3	474417.3	694060.3	205654.7	1863789.6
	VHT =	14926.3	13003.9	22671.3	5150.1	55751.6
	Average Speed =	32.81	36.48	30.61	39.93	33.43
	VOC =	336104.5	316118.7	487600.5	133979.1	1273802.8
	NOX =	539377.1	518480.9	770635.4	225836.7	2054330.2
HPMS Code 9	VMT =	1122315.8	1153957.1	1666049.2	455423.8	4397745.9
	VHT =	32114.7	32523.0	48459.8	12595.8	125693.3
	Average Speed =	34.95	35.48	34.38	36.16	34.99
	VOC =	967391.8	1010122.8	1452294.9	395092.6	3824902.1
	NOX =	1299443.7	1340745.3	1935204.1	528882.9	5104276.0
HPMS Code 11	VMT =	10377257.7	13277757.1	12828397.1	6021693.9	42505105.7
	VHT =	264183.8	279922.6	358255.1	101674.9	1004036.6
	Average Speed =	39.28	47.43	35.81	59.22	42.33
	VOC =	6770623.1	8300232.0	8558266.6	3607607.7	27236729.4
	NOX =	12545684.0	17012261.9	15500621.6	8813833.8	53872401.3

HPMS Code 12	VMT =	1810270.3	2309307.7	2379241.1	812541.1	7311360.2
	VHT =	41943.6	57183.0	59546.6	14209.0	172882.1
	Average Speed =	43.16	40.38	39.96	57.19	42.29
	VOC =	1160666.7	1510279.7	1552645.6	492127.3	4715719.3
	NOX =	2223211.1	3076972.9	2902431.0	1180714.8	9383329.8
HPMS Code 14	VMT =	3116480.5	3564610.9	4239768.4	1198474.1	12119333.9
	VHT =	100185.6	100329.1	155990.8	29408.5	385913.9
	Average Speed =	31.11	35.53	27.18	40.75	31.40
	VOC =	2173181.9	2392577.0	3096703.5	776186.5	8438648.9
	NOX =	3517191.0	4002478.3	4870909.8	1365083.1	13755662.1
HPMS Code 16	VMT =	6435701.8	7174422.8	9404977.5	2223653.9	25238756.1
	VHT =	228474.3	222304.9	379290.5	60345.8	890415.5
	Average Speed =	28.17	32.27	24.80	36.85	28.34
	VOC =	4635466.3	4948772.7	7101593.2	1477511.9	18163344.1
	NOX =	7241738.7	7967505.6	10790888.8	2469041.0	28469174.0
HPMS Code 17	VMT =	2291615.3	2479523.7	3664730.8	701503.5	9137373.3
	VHT =	92750.8	90741.6	170584.6	22153.8	376230.8
	Average Speed =	24.71	27.33	21.48	31.67	24.29
	VOC =	1729804.6	1806278.7	2937227.0	486871.1	6960181.3
	NOX =	2614193.9	2778955.2	4290427.7	773376.0	10456952.7
HPMS Code 19	VMT =	4482090.0	5642288.6	6868660.2	1834868.4	18827907.2
	VHT =	166565.4	204623.6	270189.6	62031.7	703410.3
	Average Speed =	26.91	27.57	25.42	29.58	26.77
	VOC =	3815094.8	4843816.5	5983259.0	1559035.0	16201205.3
	NOX =	5229500.0	6604480.0	8069136.4	2159707.0	22062823.5
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Grand Total	VMT =	35990335.0	42619442.2	49268905.6	16724724.8	144603407.7
	VHT =	1090882.6	1146536.8	1664985.9	373720.7	4276126.1
	VOC =	25394653.7	29244822.7	36105169.7	10950155.4	101694801.5
	NOX =	42227980.7	51514479.8	58122028.8	21913836.6	173778325.9
	Average Speed =	33.0	37.2	29.6	44.8	33.8
	VOC in tons =					112.0993
NOX in tons =					191.5578	

Note: EPA requirements for facilities designated as Rural Principle Arterials  
 \* Includes VMT and VHT for facilities re-classified as Rural Principle Arterials

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Adjusted VMT and Emissions by HPMS Code for 2015 Analysis Year for 1-Hour Maintenance SIP  
Include Post Processing of Speeds Using MOBILE6  
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		AM Peak	Mid-Day	PM Peak	Night	Total
HPMS Code 1	VMT =	1963053.4	2456684.8	2347905.1	1337477.5	8105120.9
	VHT =	41094.2	43525.4	49404.3	21494.4	155518.3
	Average Speed =	47.77	56.44	47.52	62.22	52.12
	VOC =	770083.4	937788.5	922123.4	506362.1	3136357.4
	NOX =	1350926.3	1817342.6	1629467.8	1088048.4	5885785.2
HPMS Code 2*	VMT =	1352909.1	1475698.7	1750876.9	736596.2	5316080.8
	VHT =	37375.8	35181.2	50268.3	15774.6	138600.0
	Average Speed =	36.20	41.95	34.83	46.69	38.36
	VOC =	544096.3	577097.1	710413.4	284979.0	2116585.7
	NOX =	878756.3	1011587.0	1134836.8	526273.8	3551453.8
HPMS Code 6	VMT =	1476981.9	1617776.7	1906966.2	754646.5	5756371.3
	VHT =	44907.4	41355.7	61850.6	17470.4	165584.2
	Average Speed =	32.89	39.12	30.83	43.20	34.76
	VOC =	631636.9	660595.2	831911.7	301401.8	2425545.7
	NOX =	892880.5	972700.2	1162877.5	461448.2	3489906.4
HPMS Code 7	VMT =	1695086.4	1693721.2	2303361.1	754701.1	6446869.8
	VHT =	53048.9	46244.3	74813.5	18946.4	193053.2
	Average Speed =	31.95	36.63	30.79	39.83	33.39
	VOC =	730510.2	702450.7	1004452.9	306793.4	2744207.2
	NOX =	1017859.8	1006541.1	1390419.0	450916.7	3865736.6
HPMS Code 8	VMT =	572847.0	569300.2	819282.6	237288.6	2198718.3
	VHT =	18479.9	16850.1	29246.0	5993.9	70569.8
	Average Speed =	31.00	33.79	28.01	39.59	31.16
	VOC =	249087.4	242200.0	368917.0	96580.1	956784.5
	NOX =	344636.1	339591.4	499677.1	141064.7	1324969.3
HPMS Code 9	VMT =	1274827.1	1291912.0	1875983.4	510055.0	4952777.5
	VHT =	37285.2	36703.1	56924.1	14148.9	145061.3
	Average Speed =	34.19	35.20	32.96	36.05	34.14
	VOC =	680632.7	698090.9	1017684.6	273543.0	2669951.2
	NOX =	796128.5	808014.2	1177914.4	318819.9	3100877.0
HPMS Code 11	VMT =	10777277.4	13828022.8	13555949.0	6209429.8	44370678.9
	VHT =	272641.4	295003.6	373475.9	105108.3	1046229.2
	Average Speed =	39.53	46.87	36.30	59.08	42.41
	VOC =	4389398.6	5441419.6	5630208.9	2358928.9	17819956.0
	NOX =	7014782.5	9473900.0	8831839.7	4765032.5	30085554.6

HPMS Code 12	VMT =	1823229.3	2337176.7	2358115.3	815140.2	7333661.4
	VHT =	43041.4	64432.5	59629.2	14356.8	181459.9
	Average Speed =	42.36	36.27	39.55	56.78	40.41
	VOC =	734490.0	1005424.6	964955.8	312797.8	3017668.2
	NOX =	1192365.5	1652067.5	1545575.0	617288.0	5007296.0
HPMS Code 14	VMT =	3253327.7	3770862.4	4383787.8	1243847.3	12651825.3
	VHT =	108148.1	108888.6	167669.4	31055.4	415761.5
	Average Speed =	30.08	34.63	26.15	40.05	30.43
	VOC =	1428527.3	1589291.0	2020670.1	505088.4	5543576.9
	NOX =	1994081.5	2290956.9	2743495.8	762636.3	7791170.6
HPMS Code 16	VMT =	6708387.3	7598365.6	9690873.0	2339746.6	26337372.6
	VHT =	242321.0	241957.2	389272.4	64438.6	937989.2
	Average Speed =	27.68	31.40	24.89	36.31	28.08
	VOC =	3023978.0	3290304.1	4539663.5	972822.3	11826768.0
	NOX =	4100548.6	4581886.2	6027355.4	1403430.5	16113220.6
HPMS Code 17	VMT =	2747269.9	3090306.9	4231395.2	903834.1	10972806.2
	VHT =	107375.5	109304.3	188067.3	26649.9	431397.1
	Average Speed =	25.59	28.27	22.50	33.92	25.44
	VOC =	1274126.7	1388223.3	2066608.8	383409.4	5112368.3
	NOX =	1728185.2	1924845.0	2712980.0	561778.0	6927788.2
HPMS Code 19	VMT =	5009670.1	6315711.2	7551351.2	2044660.8	20921393.2
	VHT =	185918.4	228545.1	297471.5	69221.0	781156.1
	Average Speed =	26.95	27.63	25.39	29.54	26.78
	VOC =	2653424.0	3374058.4	4106562.4	1082151.9	11216196.6
	NOX =	3169932.2	4006064.5	4810071.0	1301858.9	13287926.5
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Grand Total	VMT =	38654866.7	46045539.2	52775846.7	17887423.5	155363676.2
	VHT =	1191637.3	1267991.2	1798092.5	404658.7	4662379.6
	VOC =	17109991.6	19906943.5	24184172.6	7384858.0	68585965.7
	NOX =	24481083.0	29885496.5	33666509.3	12398595.8	100431684.7
	Average Speed =	32.4	36.3	29.4	44.2	33.3
	VOC in tons =					75.6031
NOX in tons =					110.7070	

Note: EPA requirements for facilities designated as Rural Principle Arterials  
 \* Includes VMT and VHT for facilities re-classified as Rural Principle Arterials