

Appendix 8

Mobile Input Parameters

MOBILE Input Parameters

All MOBILE6 parameters used in this conformity analysis are listed in this appendix.

Parameters associated with each MOBILE6 command were in general labeled as either EPA default, locality- (or county- or region-) specific, or NOT APPLIED. The tabulated commands where associated input parameters are labeled only as “EPA default” are generally not required as input by the analyst. References to MOBILE6 technical reports (available on the EPA MOBILE website [<http://www.epa.gov/otaq/models/mobile6/m6tech.htm>]) pertaining to particular commands/input parameters are provided in the tables. The procedures used to develop the locality-specific inputs to MOBILE6 are also detailed in this Appendix.

Table 1
MOBILE6 external conditions

Command	Function/Description	Input Parameter Source/Value
CALENDAR YEAR	Identifies calendar year for which emissions factors are to be calculated. (Required to run model).	2009, 2019, 2025, 2035
EVALUATION MONTH	Provides option of calculating January 1 or July 1 emissions factors for calendar year of evaluation.	7 (for July).
MIN/MAX TEMPERATURE	Sets minimum and maximum daily temperatures. (Required to run model if the HOURLY TEMPERATURES command is not used.)	NOT APPLIED. (See HOURLY TEMPERATURES.)
HOURLY TEMPERATURES	Allows temperatures input for each hour of day. (Required to run model if MIN/ MAX TEMPERATURE command is not used.)	County-specific by episode day (based on local time,ie., central daylight time), provided by TCEQ. See Table 2.
ALTITUDE	Specifies high- or low-altitude for modeling area.	NOT APPLIED. (EPA default, low altitude, is assumed).
ABSOLUTE HUMIDITY	Used to specify daily average humidity. Affects HC, CO, and NOx emissions for the portion of the fleet that MOBILE6 determines is using air conditioning.	NOT APPLIED. (See RELATIVE HUMIDITY.)
<u>Environmental Effects on Air Conditioning:</u>	Commands used to model the extent of vehicle air-conditioning usage.	
CLOUD COVER	Defines average percent cloud cover for given day.	NOT APPLIED. (EPA default assumed.)
PEAK SUN	Specifies Mid-Day hours with peak sun intensity.	NOT APPLIED. (EPA default assumed.)
SUNRISE/SUNSET	Allows user to specify time of sunrise and sunset.	Region-specific values (provided by TCEQ), 7 a.m. and 8 p.m.
RELATIVE HUMIDITY	Specifies use of 24 hourly relative humidity values entered by user. MOBILE6 will perform hour-specific calculations with hourly values rather than use daily default absolute humidity value.	County-specific by episode day (based on local time,ie., central daylight time), provided by TCEQ. See Table 2.
BAROMETRIC PRES	Specifies use of user input daily average barometric pressure for use with hourly relative humidity to calculate hourly absolute humidity values.	County-specific by episode day (based on local time, ie., central daylight time), provided by TCEQ. See Table 2.

Table 2
HGA Episode Day (RFP inventories climatic conditions) Hourly Climatic Parameters
input to POLFAC62_3 for 2009, 2015, 2025, 2035 – all counties

* HGA June through August Ozone Season (2006, 2007 and 2008 (10 maximum ozone day averages))													
HOURLY TEMPERATURES: 72.4 76.0 79.6 83.1 85.6 87.8 89.0 90.1 91.2 91.2 91.4 90.9 88.8 85.4 82.7 81.0 80.3 78.8 77.1 75.7 75.2 74.1 72.7 72.5													
RELATIVE HUMIDITY : 84.5 78.0 68.9 59.5 52.1 47.3 43.0 40.6 39.3 39.5 40.3 40.2 44.3 51.4 57.7 60.1 62.0 66.6 73.0 77.2 78.7 80.1 83.6 84.4													
BAROMETRIC PRES : 29.87													
SUNRISE/SUNSET : 7 8													

Table 3: MOBILE6 Vehicle Fleet Characteristics, input to POLFAC62_3

Command	Function/Description	Input Parameter Source/Value
REG DIST	Allows the user to supply registration distributions by age for any of the 16 composite (combined gasoline and diesel) vehicle types.	Locality-Specific/EPA default. TTI developed age distributions (for use with all future evaluation years) input using the latest available TxDOT registrations data and MOBILE6 defaults. Mid-year 2008 TxDOT county-level registrations data are applied. Input values are shown in Table 4-11.
DIESEL FRACTIONS	Permits user to supply locality-specific diesel fractions for 14 of the 16 composite vehicle categories by age.	Locality-Specific/EPA default. TTI developed the evaluation year-specific diesel fractions inputs with the latest available TxDOT registrations data and MOBILE6 defaults. Mid-year 2008 TxDOT HGA eight-county regional gasoline/diesel registrations data is used for HDV; LDV, LDT, Bus fractions are MOBILE6 defaults. The latest diesel fractions (2008 for TxDOT-based fractions and 1996 for MOBILE6 defaults) are assumed for each newer model year up to the future year of evaluation. Input values are shown in Table 12-Table15.

MILE ACCUM RATE	Allows the user to supply the annual mileage accumulation rates by vehicle type and age	NOT APPLIED. (EPA defaults assumed)
NGV FRACTION	Lets user specify percent of natural gas vehicles (NGV) in the fleet by type and age certified to operate on either compressed or liquefied natural gas.	NOT APPLIED. (The EPA default, zero percent, is assumed.)
NGV EF	Permits the user to enter alternate NGV emissions factors for each of the 28 vehicle types, for running and start emissions.	NOT APPLIED. (The EPA default, none, is assumed.)

**Table 4
Brazoria County Registration Distribution**

<p>REG DIST</p> <p>* Brazoria County</p> <p>* Vehicle Age Distributions Calculated from Mid-Year (July) 2008 Registrations data</p> <p>* LDV, LDT, MC: based on Brazoria County data only</p> <p>* HDVs (less HDV8b): based on 8-county nonattainment area aggregate data (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller)</p> <p>* HDV8b: based on statewide aggregate data</p> <p>* LDV</p> <p>1 0.05681 0.08925 0.08656 0.08294 0.07447 0.07097 0.07054 0.06662 0.06897 0.05980 0.05054 0.04190 0.03299 0.03257 0.02408 0.01993 0.01548 0.01203 0.00861 0.00741 0.00515 0.00337 0.00279 0.00225 0.01397</p> <p>* LDT1</p> <p>2 0.02720 0.04999 0.06261 0.05952 0.06118 0.07572 0.08625 0.07993 0.07159 0.06101 0.05513 0.05093 0.03831 0.03950 0.03710 0.02522 0.02066 0.01767 0.01565 0.01412 0.01106 0.00586 0.00582 0.00490 0.02307</p> <p>* LDT2</p> <p>3 0.02720 0.04999 0.06261 0.05952 0.06118 0.07572 0.08625 0.07993 0.07159 0.06101 0.05513 0.05093 0.03831 0.03950 0.03710 0.02522 0.02066 0.01767 0.01565 0.01412 0.01106 0.00586 0.00582 0.00490 0.02307</p> <p>* LDT3</p> <p>4 0.07536 0.12963 0.09181 0.07877 0.10171 0.09047 0.07951 0.07360 0.05383 0.06045 0.02298 0.03633 0.02384 0.01957 0.01312 0.01061 0.00936 0.00658 0.00493 0.00376 0.00345 0.00129 0.00211 0.00137 0.00556</p> <p>* LDT4</p> <p>5 0.07536 0.12963 0.09181 0.07877 0.10171 0.09047 0.07951 0.07360 0.05383 0.06045 0.02298 0.03633 0.02384 0.01957 0.01312 0.01061 0.00936 0.00658 0.00493 0.00376 0.00345 0.00129 0.00211 0.00137 0.00556</p> <p>* HDV2b</p> <p>6 0.16537 0.11950 0.13154 0.13570 0.08431 0.07228 0.05704 0.05499 0.04220 0.03330 0.01564 0.01909 0.01039 0.01255 0.00772 0.00663 0.00536 0.00440 0.00383 0.00287 0.00209 0.00153 0.00262 0.00151 0.00754</p> <p>* HDV3</p> <p>7 0.10236 0.08821 0.11499 0.06656 0.06247 0.05037 0.05753 0.07193 0.07628 0.07176 0.02233 0.04330 0.02046 0.03844 0.02600 0.01739 0.01270 0.00886 0.01091 0.00878 0.00605 0.00307 0.00281 0.00366 0.01278</p> <p>* HDV4</p> <p>8 0.07689 0.10499 0.09526 0.05968 0.06695 0.06236 0.06025 0.06389 0.08569 0.07823 0.03213 0.04591 0.04342 0.03520 0.01875 0.01339 0.00995 0.00708 0.00803 0.00689 0.00593 0.00344 0.00230 0.00172 0.01167</p> <p>* HDV5</p>

9	0.08302	0.12734	0.12894	0.09690	0.06647	0.06273	0.05526	0.06620	0.06407	0.06967	0.01789	0.02189	0.01548
	0.01602	0.00934	0.00828	0.01175	0.00854	0.01014	0.01068	0.01255	0.00427	0.00454	0.00320	0.02483	
* HDV6													
10	0.03522	0.09695	0.08386	0.06794	0.05834	0.04253	0.04209	0.07099	0.08779	0.08408	0.06609	0.03806	0.03053
	0.04155	0.02094	0.02083	0.01549	0.01734	0.01745	0.01156	0.00872	0.00665	0.00589	0.00414	0.02497	
* HDV7													
11	0.03674	0.08508	0.05304	0.05304	0.04890	0.05193	0.05635	0.05994	0.08232	0.07624	0.05525	0.05249	0.03978
	0.05110	0.02818	0.02818	0.02210	0.02541	0.02265	0.01354	0.00939	0.01188	0.00608	0.00442	0.02597	
* HDV8a													
12	0.01736	0.06117	0.04209	0.03289	0.02894	0.02802	0.03223	0.03986	0.06380	0.05446	0.04986	0.03959	0.04920
	0.06892	0.06196	0.05275	0.03920	0.03946	0.03670	0.03749	0.03236	0.02118	0.01368	0.01355	0.04328	
* HDV8b													
13	0.04990	0.14013	0.10871	0.09153	0.04383	0.05321	0.03327	0.06460	0.09722	0.08179	0.04999	0.03611	0.03143
	0.03281	0.02362	0.01682	0.00505	0.00680	0.00524	0.00625	0.00331	0.00303	0.00239	0.00276	0.01020	
* HDBS is MOBILE6 default													
* HDBT is MOBILE6 default													
* MC													
16	0.07783	0.13750	0.12534	0.09025	0.07168	0.08534	0.07441	0.06090	0.04192	0.03673	0.02403	0.01898	0.01843
	0.01679	0.01475	0.01010	0.00833	0.00546	0.00614	0.00573	0.00464	0.00396	0.00942	0.00410	0.04724	

**Table 5
Chambers County Registration Distribution**

REG DIST													
* Chambers County													
* Vehicle Age Distributions Calculated from Mid-Year (July) 2008 Registrations data													
* LDV, LDT, MC: based on Chambers County data only													
* HDVs (less HDV8b): based on 8-county nonattainment area aggregate data (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller)													
* HDV8b: based on statewide aggregate data													
* LDV													
1	0.05175	0.09063	0.09981	0.08927	0.07431	0.06511	0.06847	0.06079	0.06471	0.05639	0.04647	0.04079	0.03303
	0.03351	0.02096	0.01896	0.01488	0.01344	0.01120	0.00952	0.00600	0.00432	0.00328	0.00296	0.01944	
* LDT1													
2	0.02675	0.04767	0.06290	0.05770	0.06748	0.07046	0.08606	0.07813	0.06674	0.06216	0.05857	0.05126	0.03628
	0.03764	0.03789	0.02526	0.02204	0.01820	0.01758	0.01226	0.01053	0.00632	0.00607	0.00656	0.02749	
* LDT2													
3	0.02675	0.04767	0.06290	0.05770	0.06748	0.07046	0.08606	0.07813	0.06674	0.06216	0.05857	0.05126	0.03628
	0.03764	0.03789	0.02526	0.02204	0.01820	0.01758	0.01226	0.01053	0.00632	0.00607	0.00656	0.02749	
* LDT3													
4	0.06493	0.13437	0.09683	0.08245	0.10559	0.08942	0.08470	0.08335	0.05549	0.06156	0.01797	0.03190	0.02112
	0.01752	0.01123	0.01146	0.00629	0.00517	0.00315	0.00562	0.00247	0.00067	0.00157	0.00090	0.00427	
* LDT4													
5	0.06493	0.13437	0.09683	0.08245	0.10559	0.08942	0.08470	0.08335	0.05549	0.06156	0.01797	0.03190	0.02112
	0.01752	0.01123	0.01146	0.00629	0.00517	0.00315	0.00562	0.00247	0.00067	0.00157	0.00090	0.00427	
* HDV2b													
6	0.16537	0.11950	0.13154	0.13570	0.08431	0.07228	0.05704	0.05499	0.04220	0.03330	0.01564	0.01909	0.01039
	0.01255	0.00772	0.00663	0.00536	0.00440	0.00383	0.00287	0.00209	0.00153	0.00262	0.00151	0.00754	
* HDV3													
7	0.10236	0.08821	0.11499	0.06656	0.06247	0.05037	0.05753	0.07193	0.07628	0.07176	0.02233	0.04330	0.02046
	0.03844	0.02600	0.01739	0.01270	0.00886	0.01091	0.00878	0.00605	0.00307	0.00281	0.00366	0.01278	

* HDV4
8 0.07689 0.10499 0.09526 0.05968 0.06695 0.06236 0.06025 0.06389 0.08569 0.07823 0.03213 0.04591 0.04342
0.03520 0.01875 0.01339 0.00995 0.00708 0.00803 0.00689 0.00593 0.00344 0.00230 0.00172 0.01167

* HDV5
9 0.08302 0.12734 0.12894 0.09690 0.06647 0.06273 0.05526 0.06620 0.06407 0.06967 0.01789 0.02189 0.01548
0.01602 0.00934 0.00828 0.01175 0.00854 0.01014 0.01068 0.01255 0.00427 0.00454 0.00320 0.02483

* HDV6
10 0.03522 0.09695 0.08386 0.06794 0.05834 0.04253 0.04209 0.07099 0.08779 0.08408 0.06609 0.03806 0.03053
0.04155 0.02094 0.02083 0.01549 0.01734 0.01745 0.01156 0.00872 0.00665 0.00589 0.00414 0.02497

* HDV7
11 0.03674 0.08508 0.05304 0.05304 0.04890 0.05193 0.05635 0.05994 0.08232 0.07624 0.05525 0.05249 0.03978
0.05110 0.02818 0.02818 0.02210 0.02541 0.02265 0.01354 0.00939 0.01188 0.00608 0.00442 0.02597

* HDV8a
12 0.01736 0.06117 0.04209 0.03289 0.02894 0.02802 0.03223 0.03986 0.06380 0.05446 0.04986 0.03959 0.04920
0.06892 0.06196 0.05275 0.03920 0.03946 0.03670 0.03749 0.03236 0.02118 0.01368 0.01355 0.04328

* HDV8b
13 0.04990 0.14013 0.10871 0.09153 0.04383 0.05321 0.03327 0.06460 0.09722 0.08179 0.04999 0.03611 0.03143
0.03281 0.02362 0.01682 0.00505 0.00680 0.00524 0.00625 0.00331 0.00303 0.00239 0.00276 0.01020

* HDBS is MOBILE6 default
* HDBT is MOBILE6 default
* MC
16 0.06170 0.14201 0.13320 0.08423 0.07444 0.09207 0.08227 0.05583 0.05289 0.05485 0.02449 0.02057 0.01567
0.01371 0.01371 0.00881 0.00490 0.00588 0.00196 0.00686 0.00392 0.00098 0.00294 0.00881 0.03330

**Table 6
Fort Bend County Registration Distributions**

REG DIST
* Fort Bend County
* Vehicle Age Distributions Calculated from Mid-Year (July) 2008 Registrations data
* LDV, LDT, MC: based on Fort Bend County data only
* HDVs (less HDV8b): based on 8-county nonattainment area aggregate data (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller)
* HDV8b: based on statewide aggregate data
* LDV
1 0.05889 0.08876 0.08853 0.08268 0.07667 0.07420 0.07321 0.06903 0.07044 0.05765 0.05036 0.04185 0.03381
0.03105 0.02268 0.01846 0.01442 0.01171 0.00866 0.00565 0.00393 0.00284 0.00195 0.00184 0.01073

* LDT1
2 0.02874 0.05437 0.06649 0.06000 0.06752 0.07926 0.09473 0.08188 0.07366 0.06061 0.05943 0.05011 0.03432
0.03486 0.03225 0.02197 0.01745 0.01370 0.01274 0.01080 0.00818 0.00528 0.00535 0.00411 0.02219

* LDT2
3 0.02874 0.05437 0.06649 0.06000 0.06752 0.07926 0.09473 0.08188 0.07366 0.06061 0.05943 0.05011 0.03432
0.03486 0.03225 0.02197 0.01745 0.01370 0.01274 0.01080 0.00818 0.00528 0.00535 0.00411 0.02219

* LDT3
4 0.07372 0.15083 0.09463 0.09117 0.12697 0.10677 0.08135 0.06933 0.04378 0.04765 0.01971 0.02627 0.01567
0.01464 0.00866 0.00708 0.00498 0.00326 0.00278 0.00233 0.00174 0.00087 0.00090 0.00116 0.00375

* LDT4
5 0.07372 0.15083 0.09463 0.09117 0.12697 0.10677 0.08135 0.06933 0.04378 0.04765 0.01971 0.02627 0.01567
0.01464 0.00866 0.00708 0.00498 0.00326 0.00278 0.00233 0.00174 0.00087 0.00090 0.00116 0.00375

* HDV2b
6 0.16537 0.11950 0.13154 0.13570 0.08431 0.07228 0.05704 0.05499 0.04220 0.03330 0.01564 0.01909 0.01039

0.01255 0.00772 0.00663 0.00536 0.00440 0.00383 0.00287 0.00209 0.00153 0.00262 0.00151 0.00754

* HDV3
7 0.10236 0.08821 0.11499 0.06656 0.06247 0.05037 0.05753 0.07193 0.07628 0.07176 0.02233 0.04330 0.02046
0.03844 0.02600 0.01739 0.01270 0.00886 0.01091 0.00878 0.00605 0.00307 0.00281 0.00366 0.01278

* HDV4
8 0.07689 0.10499 0.09526 0.05968 0.06695 0.06236 0.06025 0.06389 0.08569 0.07823 0.03213 0.04591 0.04342
0.03520 0.01875 0.01339 0.00995 0.00708 0.00803 0.00689 0.00593 0.00344 0.00230 0.00172 0.01167

* HDV5
9 0.08302 0.12734 0.12894 0.09690 0.06647 0.06273 0.05526 0.06620 0.06407 0.06967 0.01789 0.02189 0.01548
0.01602 0.00934 0.00828 0.01175 0.00854 0.01014 0.01068 0.01255 0.00427 0.00454 0.00320 0.02483

* HDV6
10 0.03522 0.09695 0.08386 0.06794 0.05834 0.04253 0.04209 0.07099 0.08779 0.08408 0.06609 0.03806 0.03053
0.04155 0.02094 0.02083 0.01549 0.01734 0.01745 0.01156 0.00872 0.00665 0.00589 0.00414 0.02497

* HDV7
11 0.03674 0.08508 0.05304 0.05304 0.04890 0.05193 0.05635 0.05994 0.08232 0.07624 0.05525 0.05249 0.03978
0.05110 0.02818 0.02818 0.02210 0.02541 0.02265 0.01354 0.00939 0.01188 0.00608 0.00442 0.02597

* HDV8a
12 0.01736 0.06117 0.04209 0.03289 0.02894 0.02802 0.03223 0.03986 0.06380 0.05446 0.04986 0.03959 0.04920
0.06892 0.06196 0.05275 0.03920 0.03946 0.03670 0.03749 0.03236 0.02118 0.01368 0.01355 0.04328

* HDV8b
13 0.04990 0.14013 0.10871 0.09153 0.04383 0.05321 0.03327 0.06460 0.09722 0.08179 0.04999 0.03611 0.03143
0.03281 0.02362 0.01682 0.00505 0.00680 0.00524 0.00625 0.00331 0.00303 0.00239 0.00276 0.01020

* HDBS is MOBILE6 default
* HDBT is MOBILE6 default
* MC
16 0.07896 0.15017 0.13298 0.09795 0.07257 0.08504 0.07688 0.05907 0.04497 0.03710 0.02508 0.01707 0.01751
0.01425 0.00846 0.00980 0.00594 0.00327 0.00327 0.00371 0.00356 0.00416 0.00445 0.00445 0.03933

**Table 7
Galveston County Registration Distribution**

REG DIST
* Galveston County
* Vehicle Age Distributions Calculated from Mid-Year (July) 2008 Registrations data
* LDV, LDT, MC: based on Galveston County data only
* HDVs (less HDV8b): based on 8-county nonattainment area aggregate data (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller)
* HDV8b: based on statewide aggregate data
* LDV
1 0.05714 0.08506 0.08546 0.08166 0.07308 0.07313 0.07214 0.06676 0.06666 0.05815 0.04845 0.04111 0.03305
0.03336 0.02468 0.02004 0.01575 0.01280 0.01028 0.00831 0.00513 0.00409 0.00319 0.00304 0.01748

* LDT1
2 0.03223 0.05427 0.06408 0.05905 0.06398 0.07751 0.09227 0.08155 0.06770 0.05976 0.05666 0.04743 0.03643
0.03637 0.03569 0.02471 0.01759 0.01572 0.01502 0.01313 0.00832 0.00601 0.00627 0.00444 0.02381

* LDT2
3 0.03223 0.05427 0.06408 0.05905 0.06398 0.07751 0.09227 0.08155 0.06770 0.05976 0.05666 0.04743 0.03643
0.03637 0.03569 0.02471 0.01759 0.01572 0.01502 0.01313 0.00832 0.00601 0.00627 0.00444 0.02381

* LDT3
4 0.07954 0.15114 0.09838 0.07954 0.11632 0.09517 0.07457 0.07244 0.04587 0.05581 0.01925 0.02924 0.01848
0.01681 0.00908 0.01003 0.00592 0.00402 0.00352 0.00330 0.00158 0.00099 0.00127 0.00136 0.00637

* LDT4

5	0.07954	0.15114	0.09838	0.07954	0.11632	0.09517	0.07457	0.07244	0.04587	0.05581	0.01925	0.02924	0.01848
	0.01681	0.00908	0.01003	0.00592	0.00402	0.00352	0.00330	0.00158	0.00099	0.00127	0.00136	0.00637	
* HDV2b													
6	0.16537	0.11950	0.13154	0.13570	0.08431	0.07228	0.05704	0.05499	0.04220	0.03330	0.01564	0.01909	0.01039
	0.01255	0.00772	0.00663	0.00536	0.00440	0.00383	0.00287	0.00209	0.00153	0.00262	0.00151	0.00754	
* HDV3													
7	0.10236	0.08821	0.11499	0.06656	0.06247	0.05037	0.05753	0.07193	0.07628	0.07176	0.02233	0.04330	0.02046
	0.03844	0.02600	0.01739	0.01270	0.00886	0.01091	0.00878	0.00605	0.00307	0.00281	0.00366	0.01278	
* HDV4													
8	0.07689	0.10499	0.09526	0.05968	0.06695	0.06236	0.06025	0.06389	0.08569	0.07823	0.03213	0.04591	0.04342
	0.03520	0.01875	0.01339	0.00995	0.00708	0.00803	0.00689	0.00593	0.00344	0.00230	0.00172	0.01167	
* HDV5													
9	0.08302	0.12734	0.12894	0.09690	0.06647	0.06273	0.05526	0.06620	0.06407	0.06967	0.01789	0.02189	0.01548
	0.01602	0.00934	0.00828	0.01175	0.00854	0.01014	0.01068	0.01255	0.00427	0.00454	0.00320	0.02483	
* HDV6													
10	0.03522	0.09695	0.08386	0.06794	0.05834	0.04253	0.04209	0.07099	0.08779	0.08408	0.06609	0.03806	0.03053
	0.04155	0.02094	0.02083	0.01549	0.01734	0.01745	0.01156	0.00872	0.00665	0.00589	0.00414	0.02497	
* HDV7													
11	0.03674	0.08508	0.05304	0.05304	0.04890	0.05193	0.05635	0.05994	0.08232	0.07624	0.05525	0.05249	0.03978
	0.05110	0.02818	0.02818	0.02210	0.02541	0.02265	0.01354	0.00939	0.01188	0.00608	0.00442	0.02597	
* HDV8a													
12	0.01736	0.06117	0.04209	0.03289	0.02894	0.02802	0.03223	0.03986	0.06380	0.05446	0.04986	0.03959	0.04920
	0.06892	0.06196	0.05275	0.03920	0.03946	0.03670	0.03749	0.03236	0.02118	0.01368	0.01355	0.04328	
* HDV8b													
13	0.04990	0.14013	0.10871	0.09153	0.04383	0.05321	0.03327	0.06460	0.09722	0.08179	0.04999	0.03611	0.03143
	0.03281	0.02362	0.01682	0.00505	0.00680	0.00524	0.00625	0.00331	0.00303	0.00239	0.00276	0.01020	
* HDBS is MOBILE6 default													
* HDBT is MOBILE6 default													
* MC													
16	0.07292	0.13344	0.13002	0.09557	0.06903	0.08461	0.07414	0.05296	0.04468	0.03689	0.02715	0.01972	0.01850
	0.01814	0.01205	0.00877	0.00670	0.00645	0.00609	0.00487	0.00572	0.00536	0.00633	0.00730	0.05259	

**Table 8
Harris County Registration Distribution**

REG DIST													
* Harris County													
* Vehicle Age Distributions Calculated from Mid-Year (July) 2008 Registrations data													
* LDV, LDT, MC: based on Harris County data only													
* HDVs (less HDV8b): based on 8-county nonattainment area aggregate data (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller)													
* HDV8b: based on statewide aggregate data													
* LDV													
1	0.06845	0.08584	0.07715	0.07414	0.06700	0.06645	0.06913	0.06779	0.07036	0.06010	0.05294	0.04522	0.03643
	0.03533	0.02614	0.02164	0.01707	0.01371	0.01056	0.00736	0.00509	0.00361	0.00282	0.00252	0.01315	
* LDT1													
2	0.03627	0.05275	0.05972	0.05870	0.06254	0.07502	0.08910	0.08024	0.07322	0.06557	0.05968	0.05261	0.03474
	0.03678	0.03283	0.02321	0.01783	0.01475	0.01289	0.01159	0.00865	0.00553	0.00555	0.00480	0.02543	
* LDT2													
3	0.03627	0.05275	0.05972	0.05870	0.06254	0.07502	0.08910	0.08024	0.07322	0.06557	0.05968	0.05261	0.03474
	0.03678	0.03283	0.02321	0.01783	0.01475	0.01289	0.01159	0.00865	0.00553	0.00555	0.00480	0.02543	

* LDT3	4	0.09315	0.15095	0.09164	0.08389	0.11083	0.09534	0.07652	0.07041	0.04769	0.05294	0.02157	0.02744	0.01727
		0.01640	0.00966	0.00794	0.00551	0.00375	0.00300	0.00278	0.00199	0.00103	0.00123	0.00133	0.00574	
* LDT4	5	0.09315	0.15095	0.09164	0.08389	0.11083	0.09534	0.07652	0.07041	0.04769	0.05294	0.02157	0.02744	0.01727
		0.01640	0.00966	0.00794	0.00551	0.00375	0.00300	0.00278	0.00199	0.00103	0.00123	0.00133	0.00574	
* HDV2b	6	0.16537	0.11950	0.13154	0.13570	0.08431	0.07228	0.05704	0.05499	0.04220	0.03330	0.01564	0.01909	0.01039
		0.01255	0.00772	0.00663	0.00536	0.00440	0.00383	0.00287	0.00209	0.00153	0.00262	0.00151	0.00754	
* HDV3	7	0.10236	0.08821	0.11499	0.06656	0.06247	0.05037	0.05753	0.07193	0.07628	0.07176	0.02233	0.04330	0.02046
		0.03844	0.02600	0.01739	0.01270	0.00886	0.01091	0.00878	0.00605	0.00307	0.00281	0.00366	0.01278	
* HDV4	8	0.07689	0.10499	0.09526	0.05968	0.06695	0.06236	0.06025	0.06389	0.08569	0.07823	0.03213	0.04591	0.04342
		0.03520	0.01875	0.01339	0.00995	0.00708	0.00803	0.00689	0.00593	0.00344	0.00230	0.00172	0.01167	
* HDV5	9	0.08302	0.12734	0.12894	0.09690	0.06647	0.06273	0.05526	0.06620	0.06407	0.06967	0.01789	0.02189	0.01548
		0.01602	0.00934	0.00828	0.01175	0.00854	0.01014	0.01068	0.01255	0.00427	0.00454	0.00320	0.02483	
* HDV6	10	0.03522	0.09695	0.08386	0.06794	0.05834	0.04253	0.04209	0.07099	0.08779	0.08408	0.06609	0.03806	0.03053
		0.04155	0.02094	0.02083	0.01549	0.01734	0.01745	0.01156	0.00872	0.00665	0.00589	0.00414	0.02497	
* HDV7	11	0.03674	0.08508	0.05304	0.05304	0.04890	0.05193	0.05635	0.05994	0.08232	0.07624	0.05525	0.05249	0.03978
		0.05110	0.02818	0.02818	0.02210	0.02541	0.02265	0.01354	0.00939	0.01188	0.00608	0.00442	0.02597	
* HDV8a	12	0.01736	0.06117	0.04209	0.03289	0.02894	0.02802	0.03223	0.03986	0.06380	0.05446	0.04986	0.03959	0.04920
		0.06892	0.06196	0.05275	0.03920	0.03946	0.03670	0.03749	0.03236	0.02118	0.01368	0.01355	0.04328	
* HDV8b	13	0.04990	0.14013	0.10871	0.09153	0.04383	0.05321	0.03327	0.06460	0.09722	0.08179	0.04999	0.03611	0.03143
		0.03281	0.02362	0.01682	0.00505	0.00680	0.00524	0.00625	0.00331	0.00303	0.00239	0.00276	0.01020	
* HDBS is MOBILE6 default														
* HDBT is MOBILE6 default														
* MC	16	0.08187	0.15333	0.12541	0.09708	0.07066	0.08568	0.07062	0.05535	0.04367	0.03504	0.02617	0.01855	0.01812
		0.01508	0.01239	0.00941	0.00614	0.00428	0.00443	0.00405	0.00461	0.00352	0.00650	0.00561	0.04243	

**Table 9
Liberty County Registration Distributions**

REG DIST	
* Liberty County	
* Vehicle Age Distributions Calculated from Mid-Year (July) 2008 Registrations data	
* LDV, LDT, MC: based on Liberty County data only	
* HDVs (less HDV8b): based on 8-county nonattainment area aggregate data (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller)	
* HDV8b: based on statewide aggregate data	
* LDV	1
	0.04832
	0.07531
	0.07642
	0.07538
	0.05755
	0.05607
	0.05845
	0.06113
	0.06573
	0.06211
	0.05362
	0.04945
	0.04229
	0.04159
	0.03275
	0.02897
	0.02453
	0.02056
	0.01565
	0.01203
	0.00942
	0.00553
	0.00495
	0.00424
	0.01795
* LDT1	2
	0.02572
	0.04902
	0.05507
	0.05173
	0.05524
	0.06724
	0.07485
	0.07433
	0.06418
	0.05398
	0.05824
	0.05703
	0.03950

0.04452 0.04325 0.02924 0.02549 0.02232 0.01851 0.01857 0.01401 0.00946 0.00900 0.00732 0.03218
 * LDT2
 3 0.02572 0.04902 0.05507 0.05173 0.05524 0.06724 0.07485 0.07433 0.06418 0.05398 0.05824 0.05703 0.03950
 0.04452 0.04325 0.02924 0.02549 0.02232 0.01851 0.01857 0.01401 0.00946 0.00900 0.00732 0.03218
 * LDT3
 4 0.07889 0.13130 0.09562 0.06885 0.09369 0.08674 0.06860 0.07426 0.05174 0.05701 0.02857 0.03591 0.02934
 0.02510 0.01338 0.01403 0.00901 0.00772 0.00553 0.00489 0.00309 0.00154 0.00335 0.00309 0.00875
 * LDT4
 5 0.07889 0.13130 0.09562 0.06885 0.09369 0.08674 0.06860 0.07426 0.05174 0.05701 0.02857 0.03591 0.02934
 0.02510 0.01338 0.01403 0.00901 0.00772 0.00553 0.00489 0.00309 0.00154 0.00335 0.00309 0.00875
 * HDV2b
 6 0.16537 0.11950 0.13154 0.13570 0.08431 0.07228 0.05704 0.05499 0.04220 0.03330 0.01564 0.01909 0.01039
 0.01255 0.00772 0.00663 0.00536 0.00440 0.00383 0.00287 0.00209 0.00153 0.00262 0.00151 0.00754
 * HDV3
 7 0.10236 0.08821 0.11499 0.06656 0.06247 0.05037 0.05753 0.07193 0.07628 0.07176 0.02233 0.04330 0.02046
 0.03844 0.02600 0.01739 0.01270 0.00886 0.01091 0.00878 0.00605 0.00307 0.00281 0.00366 0.01278
 * HDV4
 8 0.07689 0.10499 0.09526 0.05968 0.06695 0.06236 0.06025 0.06389 0.08569 0.07823 0.03213 0.04591 0.04342
 0.03520 0.01875 0.01339 0.00995 0.00708 0.00803 0.00689 0.00593 0.00344 0.00230 0.00172 0.01167
 * HDV5
 9 0.08302 0.12734 0.12894 0.09690 0.06647 0.06273 0.05526 0.06620 0.06407 0.06967 0.01789 0.02189 0.01548
 0.01602 0.00934 0.00828 0.01175 0.00854 0.01014 0.01068 0.01255 0.00427 0.00454 0.00320 0.02483
 * HDV6
 10 0.03522 0.09695 0.08386 0.06794 0.05834 0.04253 0.04209 0.07099 0.08779 0.08408 0.06609 0.03806 0.03053
 0.04155 0.02094 0.02083 0.01549 0.01734 0.01745 0.01156 0.00872 0.00665 0.00589 0.00414 0.02497
 * HDV7
 11 0.03674 0.08508 0.05304 0.05304 0.04890 0.05193 0.05635 0.05994 0.08232 0.07624 0.05525 0.05249 0.03978
 0.05110 0.02818 0.02818 0.02210 0.02541 0.02265 0.01354 0.00939 0.01188 0.00608 0.00442 0.02597
 * HDV8a
 12 0.01736 0.06117 0.04209 0.03289 0.02894 0.02802 0.03223 0.03986 0.06380 0.05446 0.04986 0.03959 0.04920
 0.06892 0.06196 0.05275 0.03920 0.03946 0.03670 0.03749 0.03236 0.02118 0.01368 0.01355 0.04328
 * HDV8b
 13 0.04990 0.14013 0.10871 0.09153 0.04383 0.05321 0.03327 0.06460 0.09722 0.08179 0.04999 0.03611 0.03143
 0.03281 0.02362 0.01682 0.00505 0.00680 0.00524 0.00625 0.00331 0.00303 0.00239 0.00276 0.01020
 * HDBS is MOBILE6 default
 * HDBT is MOBILE6 default
 * MC
 16 0.08385 0.13820 0.12733 0.10197 0.06781 0.07195 0.07298 0.05383 0.04451 0.03882 0.03468 0.02536 0.01863
 0.01449 0.01398 0.01139 0.00828 0.00362 0.00362 0.00569 0.00621 0.00518 0.00414 0.00673 0.03675

**Table 11
Waller County Registration Distribution**

REG DIST

* Waller County

* Vehicle Age Distributions Calculated from Mid-Year (July) 2008 Registrations data

* LDV, LDT, MC: based on Waller County data only

* HDVs (less HDV8b): based on 8-county nonattainment area aggregate data (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller)

* HDV8b: based on statewide aggregate data

* LDV

1 0.04418 0.06425 0.07303 0.07297 0.05985 0.05694 0.06120 0.05857 0.06730 0.05779 0.05042 0.04964 0.04127
0.04503 0.03482 0.03290 0.02560 0.02319 0.01737 0.01071 0.01007 0.00745 0.00397 0.00581 0.02567

* LDT1

2 0.02350 0.04358 0.05819 0.04991 0.06099 0.07865 0.07816 0.07365 0.05430 0.05369 0.05637 0.05284 0.04005
0.04395 0.04115 0.02995 0.02666 0.02082 0.01729 0.01619 0.01461 0.00986 0.00816 0.00901 0.03847

* LDT2

3 0.02350 0.04358 0.05819 0.04991 0.06099 0.07865 0.07816 0.07365 0.05430 0.05369 0.05637 0.05284 0.04005
0.04395 0.04115 0.02995 0.02666 0.02082 0.01729 0.01619 0.01461 0.00986 0.00816 0.00901 0.03847

* LDT3

4 0.06503 0.11358 0.08816 0.07373 0.10534 0.08198 0.07671 0.07305 0.05793 0.06183 0.02771 0.04122 0.02633
0.02450 0.01443 0.01328 0.01191 0.00710 0.00641 0.00504 0.00343 0.00275 0.00229 0.00389 0.01237

* LDT4

5 0.06503 0.11358 0.08816 0.07373 0.10534 0.08198 0.07671 0.07305 0.05793 0.06183 0.02771 0.04122 0.02633
0.02450 0.01443 0.01328 0.01191 0.00710 0.00641 0.00504 0.00343 0.00275 0.00229 0.00389 0.01237

* HDV2b

6 0.16537 0.11950 0.13154 0.13570 0.08431 0.07228 0.05704 0.05499 0.04220 0.03330 0.01564 0.01909 0.01039
0.01255 0.00772 0.00663 0.00536 0.00440 0.00383 0.00287 0.00209 0.00153 0.00262 0.00151 0.00754

* HDV3

7 0.10236 0.08821 0.11499 0.06656 0.06247 0.05037 0.05753 0.07193 0.07628 0.07176 0.02233 0.04330 0.02046
0.03844 0.02600 0.01739 0.01270 0.00886 0.01091 0.00878 0.00605 0.00307 0.00281 0.00366 0.01278

* HDV4

8 0.07689 0.10499 0.09526 0.05968 0.06695 0.06236 0.06025 0.06389 0.08569 0.07823 0.03213 0.04591 0.04342
0.03520 0.01875 0.01339 0.00995 0.00708 0.00803 0.00689 0.00593 0.00344 0.00230 0.00172 0.01167

* HDV5

9 0.08302 0.12734 0.12894 0.09690 0.06647 0.06273 0.05526 0.06620 0.06407 0.06967 0.01789 0.02189 0.01548
0.01602 0.00934 0.00828 0.01175 0.00854 0.01014 0.01068 0.01255 0.00427 0.00454 0.00320 0.02483

* HDV6

10 0.03522 0.09695 0.08386 0.06794 0.05834 0.04253 0.04209 0.07099 0.08779 0.08408 0.06609 0.03806 0.03053
0.04155 0.02094 0.02083 0.01549 0.01734 0.01745 0.01156 0.00872 0.00665 0.00589 0.00414 0.02497

* HDV7

11 0.03674 0.08508 0.05304 0.05304 0.04890 0.05193 0.05635 0.05994 0.08232 0.07624 0.05525 0.05249 0.03978
0.05110 0.02818 0.02818 0.02210 0.02541 0.02265 0.01354 0.00939 0.01188 0.00608 0.00442 0.02597

* HDV8a

12 0.01736 0.06117 0.04209 0.03289 0.02894 0.02802 0.03223 0.03986 0.06380 0.05446 0.04986 0.03959 0.04920
0.06892 0.06196 0.05275 0.03920 0.03946 0.03670 0.03749 0.03236 0.02118 0.01368 0.01355 0.04328

* HDV8b

13 0.04990 0.14013 0.10871 0.09153 0.04383 0.05321 0.03327 0.06460 0.09722 0.08179 0.04999 0.03611 0.03143
0.03281 0.02362 0.01682 0.00505 0.00680 0.00524 0.00625 0.00331 0.00303 0.00239 0.00276 0.01020

* HDBS is MOBILE6 default

* HDBT is MOBILE6 default

* MC

16 0.07547 0.13326 0.10849 0.09552 0.06486 0.09198 0.06604 0.05542 0.04717 0.04363 0.02712 0.01769 0.02358
0.01297 0.01769 0.01533 0.00590 0.01061 0.00825 0.00590 0.00354 0.00943 0.00708 0.00590 0.04717

Table 13: 2019 Houston-Eight-County Region Diesel sales Fraction Estimates

* Statewide Diesel Sales Fractions Estimates - 2019

* HDV fractions are estimated from TxDOT registration data (Mid-year July 2008)

* LDV, LDT and Bus fractions are MOBILE6 defaults

* One record per vehicle type. The order of vehicle types is: LDV, LDT1, LDT2, LDT3, LDT4, HDV2B, HDV3, HDV4, HDV5, HDV6, HDV7, HDV8a, HDV8b, HDBS

DIESEL FRACTIONS :

0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090
0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00060
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260
0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01150	0.01260
0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260
0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01150	0.01260
0.70322	0.70322	0.70322	0.70322	0.70322	0.70322	0.70322	0.70322	0.70322	0.70322	0.70322	0.70322	0.70322	0.78104
0.77701	0.81682	0.81511	0.76617	0.73412	0.69588	0.56999	0.61149	0.50315	0.43662	0.43485	0.21653	0.74662	0.74662
0.74662	0.74662	0.74662	0.74662	0.74662	0.74662	0.74662	0.74662	0.74662	0.74662	0.74662	0.74662	0.74662	0.76231
0.77903	0.69612	0.67721	0.64307	0.63080	0.63362	0.64799	0.60707	0.47338	0.55825	0.52783	0.34291	0.73586	0.73586
0.73586	0.73586	0.73586	0.73586	0.73586	0.73586	0.73586	0.73586	0.73586	0.73586	0.73586	0.73586	0.73586	0.81109
0.85643	0.81755	0.76618	0.72768	0.68040	0.69225	0.72295	0.64021	0.69839	0.74090	0.63828	0.42593	0.92575	0.92575
0.92575	0.92575	0.92575	0.92575	0.92575	0.92575	0.92575	0.92575	0.92575	0.92575	0.92575	0.92575	0.92575	0.95141
0.90925	0.89474	0.87500	0.86012	0.87187	0.85993	0.88254	0.85745	0.67610	0.71290	0.78273	0.50820	0.93032	0.93032
0.93032	0.93032	0.93032	0.93032	0.93032	0.93032	0.93032	0.93032	0.93032	0.93032	0.93032	0.93032	0.93032	0.96050
0.90586	0.90150	0.92612	0.90040	0.89068	0.90190	0.86905	0.84467	0.81289	0.80214	0.81021	0.61876	0.94107	0.94107
0.94107	0.94107	0.94107	0.94107	0.94107	0.94107	0.94107	0.94107	0.94107	0.94107	0.94107	0.94107	0.94107	0.97920
0.92161	0.95933	0.95374	0.97698	0.91315	0.92151	0.92472	0.91502	0.86901	0.79577	0.82879	0.60778	0.98712	0.98712
0.98712	0.98712	0.98712	0.98712	0.98712	0.98712	0.98712	0.98712	0.98712	0.98712	0.98712	0.98712	0.98712	0.99475
0.97008	0.97429	0.94836	0.96204	0.94725	0.94588	0.94226	0.95460	0.94282	0.90690	0.92136	0.80184	0.99632	0.99632
0.99632	0.99632	0.99632	0.99632	0.99632	0.99632	0.99632	0.99632	0.99632	0.99632	0.99632	0.99632	0.99632	0.99672
0.99070	0.99799	0.99161	0.99827	0.97514	0.98578	0.98771	0.97978	0.98162	0.95165	0.97076	0.73669	0.95850	0.95850
0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850
0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.88570

Table 14: 2025 Houston-Eight-County Region Diesel sales Fraction Estimates

* Statewide Diesel Sales Fractions Estimates - 2025

* HDV fractions are estimated from TxDOT registration data (Mid-year July 2008)

* LDV, LDT and Bus fractions are MOBILE6 defaults

* One record per vehicle type. The order of vehicle types is: LDV, LDT1, LDT2, LDT3, LDT4, HDV2B, HDV3, HDV4, HDV5, HDV6, HDV7, HDV8a, HDV8b, HDBS

DIESEL FRACTIONS :

0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090
0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090	0.00090
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260
0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260
0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260
0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260	0.01260
0.70322	0.70322	0.70322	0.70322	0.70322	0.70322	0.70322	0.70322	0.70322	0.70322	0.70322	0.70322	0.70322	0.70322
0.70322	0.70322	0.70322	0.70322	0.70322	0.70322	0.78104	0.77701	0.81682	0.81511	0.76617	0.73412	0.69588	0.74662
0.74662	0.74662	0.74662	0.74662	0.74662	0.74662	0.74662	0.74662	0.74662	0.74662	0.74662	0.74662	0.74662	0.74662
0.74662	0.74662	0.74662	0.74662	0.74662	0.74662	0.76231	0.77903	0.69612	0.67721	0.64307	0.63080	0.63362	0.73586
0.73586	0.73586	0.73586	0.73586	0.73586	0.73586	0.73586	0.73586	0.73586	0.73586	0.73586	0.73586	0.73586	0.73586
0.73586	0.73586	0.73586	0.73586	0.73586	0.73586	0.81109	0.85643	0.81755	0.76618	0.72768	0.68040	0.69225	0.92575
0.92575	0.92575	0.92575	0.92575	0.92575	0.92575	0.92575	0.92575	0.92575	0.92575	0.92575	0.92575	0.92575	0.92575
0.92575	0.92575	0.92575	0.92575	0.92575	0.92575	0.95141	0.90925	0.89474	0.87500	0.86012	0.87187	0.85993	0.93032
0.93032	0.93032	0.93032	0.93032	0.93032	0.93032	0.93032	0.93032	0.93032	0.93032	0.93032	0.93032	0.93032	0.93032
0.93032	0.93032	0.93032	0.93032	0.93032	0.93032	0.96050	0.90586	0.90150	0.92612	0.90040	0.89068	0.90190	0.94107
0.94107	0.94107	0.94107	0.94107	0.94107	0.94107	0.94107	0.94107	0.94107	0.94107	0.94107	0.94107	0.94107	0.94107
0.94107	0.94107	0.94107	0.94107	0.94107	0.94107	0.97920	0.92161	0.95933	0.95374	0.97698	0.91315	0.92151	0.98712
0.98712	0.98712	0.98712	0.98712	0.98712	0.98712	0.98712	0.98712	0.98712	0.98712	0.98712	0.98712	0.98712	0.98712
0.98712	0.98712	0.98712	0.98712	0.98712	0.98712	0.99475	0.97008	0.97429	0.94836	0.96204	0.94725	0.94588	0.99632
0.99632	0.99632	0.99632	0.99632	0.99632	0.99632	0.99632	0.99632	0.99632	0.99632	0.99632	0.99632	0.99632	0.99632
0.99632	0.99632	0.99632	0.99632	0.99632	0.99632	0.99672	0.99070	0.99799	0.99161	0.99827	0.97514	0.98578	0.95850
0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850
0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850	0.95850

Table 15: 2035 Houston-Eight-County Region Diesel sales Fraction Estimates

* Statewide Diesel Sales Fractions Estimates - 2032

* HDV fractions are estimated from TxDOT registration data (Mid-year July 2008)

* LDV, LDT and Bus fractions are MOBILE6 defaults

* One record per vehicle type. The order of vehicle types is: LDV, LDT1, LDT2, LDT3, LDT4, HDV2B, HDV3, HDV4, HDV5, HDV6, HDV7, HDV8a, HDV8b, HDBS

DIESEL FRACTIONS :

0.00090 0.00090 0.00090 0.00090 0.00090 0.00090 0.00090 0.00090 0.00090 0.00090 0.00090 0.00090 0.00090
 0.00090 0.00090 0.00090 0.00090 0.00090 0.00090 0.00090 0.00090 0.00090 0.00090 0.00090 0.00090
 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000
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 0.01260 0.01260 0.01260 0.01260 0.01260 0.01260 0.01260 0.01260 0.01260 0.01260 0.01260 0.01260 0.01260
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 0.74662 0.74662 0.74662 0.74662 0.74662 0.74662 0.74662 0.74662 0.74662 0.74662 0.74662 0.74662 0.74662
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 0.73586 0.73586 0.73586 0.73586 0.73586 0.73586 0.73586 0.73586 0.73586 0.73586 0.73586 0.73586 0.73586
 0.73586 0.73586 0.73586 0.73586 0.73586 0.73586 0.73586 0.73586 0.73586 0.73586 0.73586 0.73586 0.73586
 0.92575 0.92575 0.92575 0.92575 0.92575 0.92575 0.92575 0.92575 0.92575 0.92575 0.92575 0.92575 0.92575
 0.92575 0.92575 0.92575 0.92575 0.92575 0.92575 0.92575 0.92575 0.92575 0.92575 0.92575 0.92575 0.92575
 0.93032 0.93032 0.93032 0.93032 0.93032 0.93032 0.93032 0.93032 0.93032 0.93032 0.93032 0.93032 0.93032
 0.93032 0.93032 0.93032 0.93032 0.93032 0.93032 0.93032 0.93032 0.93032 0.93032 0.93032 0.93032 0.93032
 0.94107 0.94107 0.94107 0.94107 0.94107 0.94107 0.94107 0.94107 0.94107 0.94107 0.94107 0.94107 0.94107
 0.94107 0.94107 0.94107 0.94107 0.94107 0.94107 0.94107 0.94107 0.94107 0.94107 0.94107 0.94107 0.94107
 0.98712 0.98712 0.98712 0.98712 0.98712 0.98712 0.98712 0.98712 0.98712 0.98712 0.98712 0.98712 0.98712
 0.98712 0.98712 0.98712 0.98712 0.98712 0.98712 0.98712 0.98712 0.98712 0.98712 0.98712 0.98712 0.98712
 0.99632 0.99632 0.99632 0.99632 0.99632 0.99632 0.99632 0.99632 0.99632 0.99632 0.99632 0.99632 0.99632
 0.99632 0.99632 0.99632 0.99632 0.99632 0.99632 0.99632 0.99632 0.99632 0.99632 0.99632 0.99632 0.99632
 0.95850 0.95850 0.95850 0.95850 0.95850 0.95850 0.95850 0.95850 0.95850 0.95850 0.95850 0.95850 0.95850
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Table 16
MOBILE6 Activity, input to POLFAC62_3

Command	Function/Description	Input Parameter Source/Value
VMT FRACTIONS	Used in MOBILE6 to weight the emissions of various vehicle types into average rates for groupings of vehicle classes.	APPLIED. Calculated by TTI, May 2009.
VMT BY FACILITY	VMT fractions by MOBILE6 road type combine the four road type emissions factors into the “all road types” emissions factors.	APPLIED. See Appendix 9.11.
VMT BY HOUR	Allows VMT fractions allocation by hour-of-day; applied in conversion of grams per hour (g/hr) to g/mi, as well as in weighting of hourly g/mi rates to obtain daily emissions factors.	The hourly VMT fractions are developed as county hourly total VMT divided by county 24-hour total VMT. See Table 14-20.
SPEED VMT	Allows user to allocate VMT by average speed (14 pre-selected: 2.5 and 5 through 65 at 5 mph increments) for arterials and freeways for each hour of the day.	Generic input. Same for all counties. Inputs are set up to calculate emissions factors by 14 MOBILE6 speed bin speed scenarios for MOBILE6 Freeway and Arterial road types. See Appendix 9.11.
AVERAGE SPEED	Allows a single average speed for combined freeways and arterials for the entire day.	NOT APPLIED.
STARTS PER DAY	Lets user specify the average number of engine starts per vehicle per day by vehicle types for weekend days and weekdays.	NOT APPLIED (EPA weekday defaults are applied)
START DIST	Allows user to allocate engine starts by hour of the day for weekend days and weekdays	NOT APPLIED (EPA weekday defaults are applied).
SOAK DISTRIBUTION	Allows use of alternate vehicle soak duration distributions for weekend days and weekdays.	NOT APPLIED (EPA weekday defaults assumed)
HOT SOAK ACTIVITY	Allows users to specify a hot soak duration distribution for each of 14 daily time periods for weekend days and for weekdays.	NOT APPLIED (EPA weekday defaults assumed)
DIURN SOAK ACTIVITY	Allows user set diurnal soak time distributions for each of 18 daily time periods.	NOT APPLIED. (EPA defaults assumed)
WE DA TRI LEN DI	Specifies alternate fractions of VMT that occur during trips of various durations at each hour of the average weekday.	Locality-Specific. Latest HGA regional TDM-based weekday distributions Developed by HGAC (see Tables 21-27).
WE EN TRI LEN DI	Specifies hourly alternate fractions of VMT for trips of various lengths for weekend days.	NOT APPLIED
WE VEH US	Directs MOBILE6 to use weekend activity data for calculating emissions factors.	NOT APPLIED.

Table 17
VMT by Hour for 2009

Brazoria	Chambers	Ft. Bend	Galveston	Harris	Liberty	Montgomery	Waller
0.072388	0.050455	0.066787	0.071801	0.071035	0.059751	0.066515	0.051720
0.084372	0.058808	0.077844	0.083688	0.082795	0.069643	0.077526	0.060283
0.071440	0.049794	0.065913	0.070861	0.070105	0.058969	0.065644	0.051043
0.044277	0.050861	0.045612	0.044952	0.045425	0.047634	0.045206	0.050931
0.042859	0.049232	0.044151	0.043512	0.043970	0.046107	0.043758	0.049299
0.044937	0.051618	0.046291	0.045622	0.046102	0.048343	0.045879	0.051689
0.046565	0.053490	0.047969	0.047275	0.047773	0.050095	0.047542	0.053563
0.047646	0.054731	0.049083	0.048373	0.048882	0.051258	0.048646	0.054806
0.050659	0.058191	0.052186	0.051431	0.051972	0.054499	0.051721	0.058271
0.078808	0.068673	0.077393	0.079467	0.079127	0.073273	0.077026	0.069961
0.086855	0.075685	0.085295	0.087581	0.087206	0.080754	0.084891	0.077104
0.091975	0.080145	0.090320	0.092742	0.092345	0.085514	0.089894	0.081645
0.075464	0.065759	0.074108	0.076095	0.075769	0.070163	0.073757	0.066992
0.034224	0.049204	0.037459	0.033133	0.033322	0.043161	0.038506	0.047117
0.026809	0.038544	0.029344	0.025955	0.026103	0.033810	0.030164	0.036909
0.023005	0.033075	0.025180	0.022272	0.022399	0.029013	0.025884	0.031672
0.017830	0.025634	0.019515	0.017261	0.017360	0.022486	0.020060	0.024547
0.012038	0.017306	0.013176	0.011654	0.011720	0.015181	0.013544	0.016572
0.006856	0.009857	0.007504	0.006638	0.006676	0.008647	0.007714	0.009439
0.004594	0.006605	0.005029	0.004448	0.004473	0.005794	0.005169	0.006325
0.004260	0.006125	0.004663	0.004124	0.004148	0.005372	0.004793	0.005865
0.004054	0.005829	0.004438	0.003925	0.003947	0.005113	0.004562	0.005581
0.006896	0.009915	0.007548	0.006676	0.006715	0.008697	0.007759	0.009494
0.021189	0.030464	0.023192	0.020514	0.020631	0.026723	0.023840	0.029172

Table 18
VMT by Hour for 2019

Brazoria	Chambers	Ft. Bend	Galveston	Harris	Liberty	Montgomery	Waller
0.073758	0.053136	0.068277	0.072852	0.071980	0.061648	0.068028	0.053923
0.085968	0.061933	0.079581	0.084913	0.083896	0.071854	0.079290	0.062850
0.072792	0.052441	0.067383	0.071898	0.071037	0.060841	0.067137	0.053217
0.043528	0.049642	0.044809	0.044218	0.044781	0.046860	0.044543	0.049800
0.042133	0.048051	0.043373	0.042801	0.043346	0.045359	0.043116	0.048204
0.044176	0.050381	0.045476	0.044876	0.045447	0.047558	0.045206	0.050541
0.045777	0.052207	0.047124	0.046503	0.047095	0.049282	0.046845	0.052374
0.046840	0.053419	0.048218	0.047582	0.048188	0.050426	0.047932	0.053589
0.049801	0.056796	0.051267	0.050591	0.051235	0.053614	0.050963	0.056977
0.079108	0.069809	0.078012	0.079808	0.079244	0.073675	0.077485	0.071044
0.087185	0.076937	0.085978	0.087957	0.087335	0.081198	0.085396	0.078298
0.092323	0.081470	0.091045	0.093140	0.092482	0.085981	0.090429	0.082910
0.075751	0.066846	0.074702	0.076421	0.075881	0.070549	0.074196	0.068029
0.034034	0.048014	0.036974	0.033099	0.033441	0.042560	0.037964	0.046175
0.026661	0.037611	0.028964	0.025928	0.026196	0.033339	0.029739	0.036172
0.022878	0.032275	0.024854	0.022249	0.022479	0.028609	0.025520	0.031039
0.017731	0.025014	0.019263	0.017244	0.017422	0.022172	0.019778	0.024056
0.011971	0.016888	0.013005	0.011642	0.011762	0.014970	0.013353	0.016241
0.006818	0.009619	0.007407	0.006631	0.006699	0.008526	0.007606	0.009250
0.004569	0.006445	0.004963	0.004443	0.004489	0.005713	0.005096	0.006199
0.004236	0.005976	0.004602	0.004120	0.004162	0.005298	0.004726	0.005748
0.004032	0.005688	0.004380	0.003921	0.003961	0.005042	0.004497	0.005470
0.006858	0.009675	0.007451	0.006670	0.006738	0.008576	0.007650	0.009305

0.021072	0.029727	0.022892	0.020493	0.020704	0	0.023505	0.028589
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Table 19
VMT by Hour for 2025

Brazoria	Chambers	Ft. Bend	Galveston	Harris	Liberty	Montgomery	Waller
0.074064	0.052327	0.068442	0.072783	0.071866	0.061570	0.068022	0.053585
0.086325	0.060989	0.079773	0.084833	0.083763	0.071763	0.079283	0.062456
0.073094	0.051641	0.067546	0.071830	0.070925	0.060763	0.067131	0.052883
0.043316	0.050038	0.044713	0.044306	0.044812	0.046883	0.044362	0.050013
0.041929	0.048435	0.043280	0.042886	0.043376	0.045381	0.042940	0.048411
0.043961	0.050783	0.045379	0.044966	0.045479	0.047581	0.045022	0.050758
0.045555	0.052624	0.047024	0.046596	0.047128	0.049306	0.046654	0.052598
0.046612	0.053845	0.048115	0.047677	0.048222	0.050451	0.047737	0.053819
0.049559	0.057250	0.051157	0.050692	0.051270	0.053640	0.050755	0.057221
0.079293	0.069449	0.078130	0.079617	0.079211	0.073765	0.077835	0.070463
0.087389	0.076540	0.086107	0.087747	0.087299	0.081297	0.085782	0.077658
0.092540	0.081049	0.091183	0.092917	0.092443	0.086089	0.090838	0.082232
0.075928	0.066502	0.074814	0.076239	0.075850	0.070635	0.074532	0.067473
0.033945	0.048351	0.036886	0.033199	0.033504	0.042501	0.037895	0.046638
0.026590	0.037876	0.028894	0.026006	0.026246	0.033293	0.029685	0.036534
0.022818	0.032502	0.024795	0.022316	0.022522	0.028569	0.025473	0.031350
0.017684	0.025190	0.019216	0.017296	0.017455	0.022142	0.019742	0.024297
0.011939	0.017007	0.012974	0.011677	0.011785	0.014949	0.013329	0.016404
0.006800	0.009686	0.007389	0.006651	0.006712	0.008514	0.007592	0.009343
0.004557	0.006491	0.004952	0.004457	0.004498	0.005705	0.005087	0.006261
0.004225	0.006018	0.004591	0.004132	0.004170	0.005290	0.004717	0.005805
0.004021	0.005728	0.004370	0.003933	0.003969	0.005035	0.004489	0.005525
0.006840	0.009743	0.007433	0.006690	0.006751	0.008564	0.007636	0.009398
0.021016	0.029936	0.022837	0.020554	0.020744	0.026314	0.023462	0.028875

Table 20
VMT by Hour for 2025

Brazoria	Chambers	Ft. Bend	Galveston	Harris	Liberty	Montgomery	Waller
0.074298	0.052851	0.068795	0.072591	0.071866	0.061911	0.068411	0.054217
0.086598	0.061601	0.080184	0.084608	0.083764	0.072160	0.079736	0.063192
0.073325	0.052159	0.067894	0.071640	0.070925	0.061100	0.067515	0.053507
0.043106	0.049740	0.044649	0.044648	0.044731	0.046826	0.044255	0.049563
0.041725	0.048146	0.043219	0.043218	0.043297	0.045325	0.042837	0.047975
0.043748	0.050481	0.045314	0.045313	0.045397	0.047523	0.044914	0.050301
0.045334	0.052311	0.046957	0.046955	0.047042	0.049246	0.046542	0.052125
0.046386	0.053525	0.048047	0.048045	0.048134	0.050389	0.047622	0.053335
0.049319	0.056909	0.051084	0.051083	0.051177	0.053575	0.050633	0.056707
0.079505	0.069957	0.078081	0.079651	0.079207	0.074018	0.078124	0.071131
0.087623	0.077099	0.086053	0.087784	0.087295	0.081575	0.086101	0.078394
0.092788	0.081642	0.091123	0.092958	0.092442	0.086382	0.091176	0.083011
0.076131	0.066988	0.074767	0.076271	0.075846	0.070876	0.074809	0.068112
0.033876	0.047942	0.036779	0.032844	0.033615	0.042124	0.037518	0.046215
0.026537	0.037555	0.028811	0.025729	0.026332	0.032998	0.029390	0.036202
0.022772	0.032227	0.024723	0.022078	0.022596	0.028316	0.025220	0.031066
0.017649	0.024976	0.019161	0.017111	0.017513	0.021945	0.019546	0.024076
0.011915	0.016862	0.012936	0.011552	0.011823	0.014816	0.013196	0.016255
0.006787	0.009604	0.007368	0.006580	0.006734	0.008439	0.007516	0.009258
0.004548	0.006436	0.004937	0.004409	0.004512	0.005655	0.005036	0.006204
0.004217	0.005967	0.004578	0.004088	0.004184	0.005243	0.004670	0.005753

0.004013	0.005679	0.004357	0.003891	0.003982	0.004990	0.004444	0.005475
0.006826	0.009661	0.007411	0.006618	0.006774	0.008488	0.007560	0.009313
0.020974	0.029682	0.022772	0.020335	0.020812	0.026080	0.023229	0.028613

TABLE 21
2009 HGA Percent of VMT by Trip Length, Hourly input to POLFAC62_3

Hour	Trip Length Ranges (minutes)					
	< 10	11-20	21-30	31-40	41-50	>51
6 a.m.	11.11	25.51	24.88	17.15	10.01	11.34
7 a.m.	11.11	25.51	24.88	17.15	10.01	11.34
8 a.m.	11.11	25.51	24.88	17.15	10.01	11.34
9 a.m.	14.36	28.60	23.30	14.02	07.77	11.95
10 a.m.	14.36	28.60	23.30	14.02	07.77	11.95
11 a.m.	14.36	28.60	23.30	14.02	07.77	11.95
12 a.m.	14.36	28.60	23.30	14.02	07.77	11.95
1 p.m.	14.36	28.60	23.30	14.02	07.77	11.95
2 p.m.	14.36	28.60	23.30	14.02	07.77	11.95
3 p.m.	13.33	27.79	24.25	15.42	08.55	10.66
4 p.m.	13.33	27.79	24.25	15.42	08.55	10.66
5 p.m.	13.33	27.79	24.25	15.42	08.55	10.66
6 p.m.	13.33	27.79	24.25	15.42	08.55	10.66
7 p.m. through 5 a.m.	13.68	27.46	22.75	14.11	08.16	13.84

TABLE 22
2019 HGA Percent of VMT by Trip Length, Hourly input to POLFAC62_3

Hour	Trip Length Ranges (minutes)					
	< 10	11-20	21-30	31-40	41-50	>51
6 a.m.	09.93	24.07	25.09	18.24	10.83	11.84
7 a.m.	09.93	24.07	25.09	18.24	10.83	11.84
8 a.m.	09.93	24.07	25.09	18.24	10.83	11.84
9 a.m.	13.34	27.85	23.97	14.88	08.24	11.72
10 a.m.	13.34	27.85	23.97	14.88	08.24	11.72
11 a.m.	13.34	27.85	23.97	14.88	08.24	11.72
12 a.m.	13.34	27.85	23.97	14.88	08.24	11.72
1 p.m.	13.34	27.85	23.97	14.88	08.24	11.72
2 p.m.	13.34	27.85	23.97	14.88	08.24	11.72
3 p.m.	12.07	26.61	24.81	16.47	09.21	10.83
4 p.m.	12.07	26.61	24.81	16.47	09.21	10.83
5 p.m.	12.07	26.61	24.81	16.47	09.21	10.83
6 p.m.	12.07	26.61	24.81	16.47	09.21	10.83
7 p.m. through 5 a.m.	12.50	26.43	23.49	15.15	08.78	13.65

TABLE 23
2025 HGA Percent of VMT by Trip Length, Hourly input to POLFAC62_3

Hour	<i>Trip Length Ranges (minutes)</i>					
	< 10	11-20	21-30	31-40	41-50	>51
6 a.m.	09.56	23.71	25.17	18.63	11.06	11.87
7 a.m.	09.56	23.71	25.17	18.63	11.06	11.87
8 a.m.	09.56	23.71	25.17	18.63	11.06	11.87
9 a.m.	12.84	27.65	24.24	15.22	08.35	11.70
10 a.m.	12.84	27.65	24.24	15.22	08.35	11.70
11 a.m.	12.84	27.65	24.24	15.22	08.35	11.70
12 a.m.	12.84	27.65	24.24	15.22	08.35	11.70
1 p.m.	12.84	27.65	24.24	15.22	08.35	11.70
2 p.m.	12.84	27.65	24.24	15.22	08.35	11.70
3 p.m.	11.63	26.34	25.00	16.82	09.37	10.84
4 p.m.	11.63	26.34	25.00	16.82	09.37	10.84
5 p.m.	11.63	26.34	25.00	16.82	09.37	10.84
6 p.m.	11.63	26.34	25.00	16.82	09.37	10.84
7 p.m. through 5 a.m.	12.02	26.14	23.74	15.56	08.94	13.60

TABLE 24
2035 HGA Percent of VMT by Trip Length, Hourly input to POLFAC62_3

Hour	<i>Trip Length Ranges (minutes)</i>					
	< 10	11-20	21-30	31-40	41-50	>51
6 a.m.	09.19	23.13	25.11	19.06	11.47	12.04
7 a.m.	09.19	23.13	25.11	19.06	11.47	12.04
8 a.m.	09.19	23.13	25.11	19.06	11.47	12.04
9 a.m.	12.49	27.17	24.30	15.57	08.66	11.81
10 a.m.	12.49	27.17	24.30	15.57	08.66	11.81
11 a.m.	12.49	27.17	24.30	15.57	08.66	11.81
12 a.m.	12.49	27.17	24.30	15.57	08.66	11.81
1 p.m.	12.49	27.17	24.30	15.57	08.66	11.81
2 p.m.	12.49	27.17	24.30	15.57	08.66	11.81
3 p.m.	11.21	25.76	25.04	17.26	09.74	10.99
4 p.m.	11.21	25.76	25.04	17.26	09.74	10.99
5 p.m.	11.21	25.76	25.04	17.26	09.74	10.99
6 p.m.	11.21	25.76	25.04	17.26	09.74	10.99
7 p.m. through 5 a.m.	11.60	25.64	23.87	16.01	09.27	13.61

**Table 25
MOBILE6 State Programs**

Command	Function Description	Input Parameter Source/Value
STAGE II REFUELING	Allows modeling of at-the-pump refueling emissions.	NOT APPLIED. Accounted for as an area source category.
ANTI-TAMP PROG	Allows user to model impacts of an ATP.	Locality-Specific. Program design by county. Applied to Harris and urban counties. Rural counties: no ATP. See Table 44-45 .
<u>I/M Commands:</u> I/M PROGRAM I/M MODEL YEARS I/M VEHICLES I/M STRINGENCY I/M COMPLIANCE I/M WAIVER RATES I/M CUTPOINTS I/M EXEMPTION AGE I/M GRACE PERIOD NO I/M TTC CREDITS I/M EFFECTIVENESS I/M DESC FILE	Required for exhaust/evaporative I/M programs. Required for exhaust/evaporative I/M programs. Required for exhaust/evaporative I/M programs. Required for exhaust. Do not use for evaporative. Required for exhaust. Optional for evaporative. Required for exhaust. Optional for evaporative. Optional for exhaust (but required for IM240). Do not use with evaporative. Optional for both exhaust and evaporative. Optional for both exhaust and evaporative. Optional for exhaust. Do not use with evaporative. Optional for exhaust. Do not use with evaporative. Optional for both.	Locality Specific. Program design by county. Applied to Harris and urban counties. See Tables 29-43 . No I/M program for rural counties.

***Please note:**

- 1) MOBILE6 can only model one ATP program per run;
- 2) MOBILE6 assumes a January 1st start for I/M and ATP start year;

All evaluations require emissions factor post-processing to account for the full effects of the two-part ATP. All evaluations also required emissions factor post-processing to account for the effects of the May 1st I/M start dates (or in the case of Harris county, the May 1st I/M test type switch). For the Urban counties, it is assumed that the ATP start dates coincide with the exhaust I/M program start dates for those counties.

Two-Part ATP Post-processing

To model the full effects of the two-part ATP (as described in Table 26) for each affected county, emission factors from three runs were combined as follows:

$$EF_{ATP1} + EF_{ATP2} - EF_{NO\ ATP} = EF_{FINAL}$$

Where:

EF_{ATP1} = emissions factor with ATP1 credits

EF_{ATP2} = emissions factor with ATP2 credits

EF_{NO ATP} = emissions factor with no ATP credits

EF_{FINAL} = emissions factor with including estimated credits for both ATP1 and ATP2.

The calculation is performed for each county and evaluation. The calculation is performed for a second set of runs, which is required to develop emissions factor input for the May 1st post-processing step (see EF_{Start year +1} definition). The resulting emissions factors after this step include the full effects of the two-part ATP.

There are two different procedures for emissions factor post-processing due to I/M:

1) Harris county May 1st 2002 I/M test type switch; and 2) urban counties May 1st I/M start date. In each procedure, ratio calculations are performed on two sets of emission factors and the results are summed to achieve one set of emission factors with the desired I/M program effects. Each procedure is described in the next two sub-sections below.

May 1st I/M Post-Processing-Harris 2002 Control Strategy Evaluations

Modeling the May 1st program effects for Harris County for the 2002 analysis year: to model the 2002 Harris County emission factors, post-processing is required to account for the proportions of the vehicles in I/M subject fleets assumed to have been tested by the evaluation data (July 1, 2002) under each of the two I/M test types (pre-May TSI I/M test type and May 1st ASM-2 and OBD I/M test types). The assumption is that for annual cycle I/M programs with a test type change within one year of the evaluation date, the proportion of vehicles in the subject fleet that have been tested by the evaluation date under the new test is equal to the ratio of the number of years in the I/M program cycle, or 12 months. Conversely, the proportion of the subject fleet tested under the old program by the evaluation date is 1.0 minus the proportion of the subject fleet tested under the new program. For the 2002 Harris County analysis, the number of months for the test type change to the evaluation date is two months (i.e. May 1st test type switch to the July 1st evaluation date). Thus, the proportions used are: 1) 2/12 or 0.1667, under the new test, and 2) 10/12 or 0.8333 under the old test. After first performing post-processing to account for the full effects of the two-part ATP (as described in Step 1 above), the resulting emissions factors (one set with new I/M test benefit and one with old I/M tests benefit) are combined using these proportions.

May 1st I/M Post-Processing- Urban counties

In order to model the effects of May 1st program start date for urban counties, ratio calculations were performed on the emission factors from the first adjustment step. There are two MOBILE6 emissions factor sets required for this calculation: 1) the actual start year and 2) one year after actual start year. The emissions factors from these two sets are combined as:

$$EF_{FINAL} = \{((N - 1) \cdot 12 + 8) \times EF_{Act. Start Year} + 4 \times EF_{Start Year + 1}\} / (12 \times N)$$

Where:

N = evaluation year – start year

EF_{Act. Start Year} = emissions factor with actual exhaust I/M and ATP start year

EF_{Start Year + 1} = emissions factor with an exhaust I/M and ATP start one year later

EF_{FINAL} = emissions factor with the estimated May 1 start date of the actual I/M start year

Table 26
2009 Exhaust and Evaporative I/M setups for Harris County input to RATEADJ62

<p>* 2009 Exhaust and Evaporative I/M setups for Harris County</p> <p>> Exhaust I/M: 2009; 2500/IDLE (all HDG) I/M PROGRAM : 1 1997 2050 1 TRC 2500/IDLE I/M MODEL YEARS : 1 1985 2007 I/M VEHICLES : 1 11111 22222222 2 I/M STRINGENCY : 1 20 I/M COMPLIANCE : 1 96 I/M WAIVER RATES : 1 3 3</p> <p>> Exhaust I/M: 2009; ASM 2525/5015 PHASE-IN (LDG 95-) I/M PROGRAM : 2 1997 2050 1 TRC ASM 2525/5015 PHASE-IN I/M MODEL YEARS : 2 1985 1995 I/M VEHICLES : 2 22222 11111111 1 I/M STRINGENCY : 2 20 I/M COMPLIANCE : 2 96 I/M WAIVER RATES : 2 3 3</p> <p>> Exhaust I/M: 2009; OBD I/M (LDG 96+) I/M PROGRAM : 3 1997 2050 1 TRC OBD I/M I/M MODEL YEARS : 3 1996 2007 I/M VEHICLES : 3 22222 11111111 1 I/M STRINGENCY : 3 20 I/M COMPLIANCE : 3 96 I/M WAIVER RATES : 3 3 3</p> <p>I/M EFFECTIVENESS : 1 1 1</p> <p>> Evaporative I/M: 2009: GC (all HDG) I/M PROGRAM : 4 1997 2050 1 TRC GC I/M MODEL YEARS : 4 1985 2007 I/M VEHICLES : 4 11111 22222222 2 I/M COMPLIANCE : 4 96 I/M WAIVER RATES : 4 3 3</p> <p>> Evaporative I/M: 2009: GC (LDG 95-) I/M PROGRAM : 5 1997 2050 1 TRC GC I/M MODEL YEARS : 5 1985 1995 I/M VEHICLES : 5 22222 11111111 1 I/M COMPLIANCE : 5 96 I/M WAIVER RATES : 5 3 3</p> <p>> Evaporative I/M: 2009: EVAP OBD & GC (LDG 96+) I/M PROGRAM : 6 1997 2050 1 TRC EVAP OBD & GC I/M MODEL YEARS : 6 1996 2007 I/M VEHICLES : 6 22222 11111111 1 I/M COMPLIANCE : 6 96 I/M WAIVER RATES : 6 3 3</p>

Table 27
2009 Exhaust and Evaporative I/M setups for HGA Urban Counties: Brazoria, Fort Bend, Galveston, Montgomery input to RATEADJ62

<p>* 2009 Exhaust and Evaporative I/M setups for * HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery</p> <p>> Exhaust I/M: 2009 eval; 2003 start; 2500/IDLE (all HDG) I/M PROGRAM : 1 2003 2050 1 TRC 2500/IDLE I/M MODEL YEARS : 1 1985 2007 I/M VEHICLES : 1 11111 22222222 2 I/M STRINGENCY : 1 20 I/M COMPLIANCE : 1 96 I/M WAIVER RATES : 1 3 3</p> <p>> Exhaust I/M: 2009 eval; 2003 start; ASM 2525/5015 PHASE-IN (LDG 95-) I/M PROGRAM : 2 2003 2050 1 TRC ASM 2525/5015 PHASE-IN I/M MODEL YEARS : 2 1985 1995 I/M VEHICLES : 2 22222 11111111 1 I/M STRINGENCY : 2 20 I/M COMPLIANCE : 2 96 I/M WAIVER RATES : 2 3 3</p> <p>> Exhaust I/M: 2009 eval; 2003 start; OBD I/M (LDG 96+) I/M PROGRAM : 3 2003 2050 1 TRC OBD I/M I/M MODEL YEARS : 3 1996 2007 I/M VEHICLES : 3 22222 11111111 1 I/M STRINGENCY : 3 20 I/M COMPLIANCE : 3 96 I/M WAIVER RATES : 3 3 3</p> <p>I/M EFFECTIVENESS : 1 1 1</p> <p>> Evaporative I/M: 2009 eval; 2000 start; GC (all HDG) I/M PROGRAM : 4 2000 2050 1 TRC GC I/M MODEL YEARS : 4 1985 2007 I/M VEHICLES : 4 11111 22222222 2 I/M COMPLIANCE : 4 96 I/M WAIVER RATES : 4 3 3</p> <p>> Evaporative I/M: 2009 eval; 2000 start; GC (LDG 95-) I/M PROGRAM : 5 2000 2050 1 TRC GC I/M MODEL YEARS : 5 1985 1995 I/M VEHICLES : 5 22222 11111111 1 I/M COMPLIANCE : 5 96 I/M WAIVER RATES : 5 3 3</p> <p>> Evaporative I/M: 2009 eval; 2000 start; EVAP OBD & GC (LDG 96+) I/M PROGRAM : 6 2000 2050 1 TRC EVAP OBD & GC I/M MODEL YEARS : 6 1996 2007 I/M VEHICLES : 6 22222 11111111 1 I/M COMPLIANCE : 6 96 I/M WAIVER RATES : 6 3 3</p>
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Table 28
2009 Exhaust and Evaporative I/M setups for HGA Urban County Ratio Calculation to
get May 1 start (actual Urban County start year is 2003) input to RATEADJ62

<p>* 2009 Exhaust and Evaporative I/M setups for * HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery * (actual Urban County start year is 2003)</p> <p>> Exhaust I/M: 2009 eval; 2004 start; 2500/IDLE (all HDG) I/M PROGRAM : 1 2004 2050 1 TRC 2500/IDLE I/M MODEL YEARS : 1 1985 2007 I/M VEHICLES : 1 11111 22222222 2 I/M STRINGENCY : 1 20 I/M COMPLIANCE : 1 96 I/M WAIVER RATES : 1 3 3</p> <p>> Exhaust I/M: 2009 eval; 2004 start; ASM 2525/5015 PHASE-IN (LDG 95-) I/M PROGRAM : 2 2004 2050 1 TRC ASM 2525/5015 PHASE-IN I/M MODEL YEARS : 2 1985 1995 I/M VEHICLES : 2 22222 11111111 1 I/M STRINGENCY : 2 20 I/M COMPLIANCE : 2 96 I/M WAIVER RATES : 2 3 3</p> <p>> Exhaust I/M: 2009 eval; 2004 start; OBD I/M (LDG 96+) I/M PROGRAM : 3 2004 2050 1 TRC OBD I/M I/M MODEL YEARS : 3 1996 2007 I/M VEHICLES : 3 22222 11111111 1 I/M STRINGENCY : 3 20 I/M COMPLIANCE : 3 96 I/M WAIVER RATES : 3 3 3</p> <p>I/M EFFECTIVENESS : 1 1 1</p> <p>> Evaporative I/M: 2009 eval; 2000 start; GC (all HDG) I/M PROGRAM : 4 2000 2050 1 TRC GC I/M MODEL YEARS : 4 1985 2007 I/M VEHICLES : 4 11111 22222222 2 I/M COMPLIANCE : 4 96 I/M WAIVER RATES : 4 3 3</p> <p>> Evaporative I/M: 2009 eval; 2000 start; GC (LDG 95-) I/M PROGRAM : 5 2000 2050 1 TRC GC I/M MODEL YEARS : 5 1985 1995 I/M VEHICLES : 5 22222 11111111 1 I/M COMPLIANCE : 5 96 I/M WAIVER RATES : 5 3 3</p> <p>> Evaporative I/M: 2009 eval; 2000 start; EVAP OBD & GC (LDG 96+)</p>
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I/M PROGRAM : 6 2000 2050 1 TRC EVAP OBD & GC
I/M MODEL YEARS : 6 1996 2007
I/M VEHICLES : 6 22222 11111111 1
I/M COMPLIANCE : 6 96
I/M WAIVER RATES : 6 3 3

Table 29
2019 Exhaust and Evaporative I/M setups for Harris County input to RATEADJ62

<p>* 2019 Exhaust and Evaporative I/M setups for Harris County</p> <p>> Exhaust I/M: 2019; 2500/IDLE (all HDG) I/M PROGRAM : 1 1997 2050 1 TRC 2500/IDLE I/M MODEL YEARS : 1 1995 2017 I/M VEHICLES : 1 11111 22222222 2 I/M STRINGENCY : 1 20 I/M COMPLIANCE : 1 96 I/M WAIVER RATES : 1 3 3</p> <p>> Exhaust I/M: 2019; ASM 2525/5015 PHASE-IN (LDG 95-) I/M PROGRAM : 2 1997 2050 1 TRC ASM 2525/5015 PHASE-IN I/M MODEL YEARS : 2 1995 1995 I/M VEHICLES : 2 22222 11111111 1 I/M STRINGENCY : 2 20 I/M COMPLIANCE : 2 96 I/M WAIVER RATES : 2 3 3</p> <p>> Exhaust I/M: 2019; OBD I/M (LDG 96+) I/M PROGRAM : 3 1997 2050 1 TRC OBD I/M I/M MODEL YEARS : 3 1996 2017 I/M VEHICLES : 3 22222 11111111 1 I/M STRINGENCY : 3 20 I/M COMPLIANCE : 3 96 I/M WAIVER RATES : 3 3 3</p> <p>I/M EFFECTIVENESS : 1 1 1</p> <p>> Evaporative I/M: 2019: GC (all HDG) I/M PROGRAM : 4 1997 2050 1 TRC GC I/M MODEL YEARS : 4 1995 2017 I/M VEHICLES : 4 11111 22222222 2 I/M COMPLIANCE : 4 96 I/M WAIVER RATES : 4 3 3</p> <p>> Evaporative I/M: 2019: GC (LDG 95-) I/M PROGRAM : 5 1997 2050 1 TRC GC I/M MODEL YEARS : 5 1995 1995 I/M VEHICLES : 5 22222 11111111 1 I/M COMPLIANCE : 5 96 I/M WAIVER RATES : 5 3 3</p> <p>> Evaporative I/M: 2019: EVAP OBD & GC (LDG 96+) I/M PROGRAM : 6 1997 2050 1 TRC EVAP OBD & GC I/M MODEL YEARS : 6 1996 2017 I/M VEHICLES : 6 22222 11111111 1 I/M COMPLIANCE : 6 96 I/M WAIVER RATES : 6 3 3</p>
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Table 30
2019 Exhaust and Evaporative I/M setups for HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery input to RATEADJ62

<p>* 2019 Exhaust and Evaporative I/M setups for * HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery</p> <p>> Exhaust I/M: 2019 eval; 2003 start; 2500/IDLE (all HDG) I/M PROGRAM : 1 2003 2050 1 TRC 2500/IDLE I/M MODEL YEARS : 1 1995 2017 I/M VEHICLES : 1 11111 22222222 2 I/M STRINGENCY : 1 20 I/M COMPLIANCE : 1 96 I/M WAIVER RATES : 1 3 3</p> <p>> Exhaust I/M: 2019 eval; 2003 start; ASM 2525/5015 PHASE-IN (LDG 95-) I/M PROGRAM : 2 2003 2050 1 TRC ASM 2525/5015 PHASE-IN I/M MODEL YEARS : 2 1995 1995 I/M VEHICLES : 2 22222 11111111 1 I/M STRINGENCY : 2 20 I/M COMPLIANCE : 2 96 I/M WAIVER RATES : 2 3 3</p> <p>> Exhaust I/M: 2019 eval; 2003 start; OBD I/M (LDG 96+) I/M PROGRAM : 3 2003 2050 1 TRC OBD I/M I/M MODEL YEARS : 3 1996 2017 I/M VEHICLES : 3 22222 11111111 1 I/M STRINGENCY : 3 20 I/M COMPLIANCE : 3 96 I/M WAIVER RATES : 3 3 3</p> <p>I/M EFFECTIVENESS : 1 1 1</p> <p>> Evaporative I/M: 2019 eval; 2000 start; GC (all HDG) I/M PROGRAM : 4 2000 2050 1 TRC GC I/M MODEL YEARS : 4 1995 2017 I/M VEHICLES : 4 11111 22222222 2 I/M COMPLIANCE : 4 96 I/M WAIVER RATES : 4 3 3</p> <p>> Evaporative I/M: 2019 eval; 2000 start; GC (LDG 95-) I/M PROGRAM : 5 2000 2050 1 TRC GC I/M MODEL YEARS : 5 1995 1995 I/M VEHICLES : 5 22222 11111111 1 I/M COMPLIANCE : 5 96 I/M WAIVER RATES : 5 3 3</p> <p>> Evaporative I/M: 2019 eval; 2000 start; EVAP OBD & GC (LDG 96+) I/M PROGRAM : 6 2000 2050 1 TRC EVAP OBD & GC I/M MODEL YEARS : 6 1996 2017 I/M VEHICLES : 6 22222 11111111 1</p>

I/M COMPLIANCE	: 6 96
I/M WAIVER RATES	: 6 3 3

Table 31
2019 Exhaust and Evaporative I/M setups for HGA Urban County Ratio Calculation to get May 1 start (actual Urban County start year is 2003) input to RATEADJ62

* 2019 Exhaust and Evaporative I/M setups for	
* HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery	
* (actual Urban County start year is 2003)	
> Exhaust I/M: 2019 eval; 2004 start; 2500/IDLE (all HDG)	
I/M PROGRAM	: 1 2004 2050 1 TRC 2500/IDLE
I/M MODEL YEARS	: 1 1995 2017
I/M VEHICLES	: 1 11111 22222222 2
I/M STRINGENCY	: 1 20
I/M COMPLIANCE	: 1 96
I/M WAIVER RATES	: 1 3 3
> Exhaust I/M: 2019 eval; 2004 start; ASM 2525/5015 PHASE-IN (LDG 95-)	
I/M PROGRAM	: 2 2004 2050 1 TRC ASM 2525/5015 PHASE-IN
I/M MODEL YEARS	: 2 1995 1995
I/M VEHICLES	: 2 22222 11111111 1
I/M STRINGENCY	: 2 20
I/M COMPLIANCE	: 2 96
I/M WAIVER RATES	: 2 3 3
> Exhaust I/M: 2019 eval; 2004 start; OBD I/M (LDG 96+)	
I/M PROGRAM	: 3 2004 2050 1 TRC OBD I/M
I/M MODEL YEARS	: 3 1996 2017
I/M VEHICLES	: 3 22222 11111111 1
I/M STRINGENCY	: 3 20
I/M COMPLIANCE	: 3 96
I/M WAIVER RATES	: 3 3 3
I/M EFFECTIVENESS : 1 1 1	
> Evaporative I/M: 2019 eval; 2000 start; GC (all HDG)	
I/M PROGRAM	: 4 2000 2050 1 TRC GC
I/M MODEL YEARS	: 4 1995 2017
I/M VEHICLES	: 4 11111 22222222 2
I/M COMPLIANCE	: 4 96
I/M WAIVER RATES	: 4 3 3
> Evaporative I/M: 2019 eval; 2000 start; GC (LDG 95-)	
I/M PROGRAM	: 5 2000 2050 1 TRC GC
I/M MODEL YEARS	: 5 1995 1995
I/M VEHICLES	: 5 22222 11111111 1
I/M COMPLIANCE	: 5 96
I/M WAIVER RATES	: 5 3 3
> Evaporative I/M: 2019 eval; 2000 start; EVAP OBD & GC (LDG 96+)	
I/M PROGRAM	: 6 2000 2050 1 TRC EVAP OBD & GC
I/M MODEL YEARS	: 6 1996 2017
I/M VEHICLES	: 6 22222 11111111 1

I/M COMPLIANCE	: 6 96
I/M WAIVER RATES	: 6 3 3

Table 32

2025 Exhaust and Evaporative I/M setups for Harris County input to RATEADJ62

* 2025 Exhaust and Evaporative I/M setups for Harris County	
> Exhaust I/M: 2025; 2500/IDLE (all HDG)	
I/M PROGRAM	: 1 1997 2050 1 TRC 2500/IDLE
I/M MODEL YEARS	: 1 2001 2023
I/M VEHICLES	: 1 11111 22222222 2
I/M STRINGENCY	: 1 20
I/M COMPLIANCE	: 1 96
I/M WAIVER RATES	: 1 3 3
> Exhaust I/M: 2025; OBD I/M (LDG 96+)	
I/M PROGRAM	: 2 1997 2050 1 TRC OBD I/M
I/M MODEL YEARS	: 2 2001 2023
I/M VEHICLES	: 2 22222 11111111 1
I/M STRINGENCY	: 2 20
I/M COMPLIANCE	: 2 96
I/M WAIVER RATES	: 2 3 3
I/M EFFECTIVENESS : 1 1 1	
> Evaporative I/M: 2025: GC (all HDG)	
I/M PROGRAM	: 3 1997 2050 1 TRC GC
I/M MODEL YEARS	: 3 2001 2023
I/M VEHICLES	: 3 11111 22222222 2
I/M COMPLIANCE	: 3 96
I/M WAIVER RATES	: 3 3 3
> Evaporative I/M: 2025: EVAP OBD & GC (LDG 96+)	
I/M PROGRAM	: 4 1997 2050 1 TRC EVAP OBD & GC
I/M MODEL YEARS	: 4 2001 2023
I/M VEHICLES	: 4 22222 11111111 1
I/M COMPLIANCE	: 4 96
I/M WAIVER RATES	: 4 3 3

Table 33
2025 Exhaust and Evaporative I/M setups for HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery input to RATEADJ62

<p>* 2025 Exhaust and Evaporative I/M setups for * HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery</p> <p>> Exhaust I/M: 2025 eval; 2003 start; 2500/IDLE (all HDG) I/M PROGRAM : 1 2003 2050 1 TRC 2500/IDLE I/M MODEL YEARS : 1 2001 2023 I/M VEHICLES : 1 11111 22222222 2 I/M STRINGENCY : 1 20 I/M COMPLIANCE : 1 96 I/M WAIVER RATES : 1 3 3</p> <p>> Exhaust I/M: 2025 eval; 2003 start; OBD I/M (LDG 96+) I/M PROGRAM : 2 2003 2050 1 TRC OBD I/M I/M MODEL YEARS : 2 2001 2023 I/M VEHICLES : 2 22222 11111111 1 I/M STRINGENCY : 2 20 I/M COMPLIANCE : 2 96 I/M WAIVER RATES : 2 3 3</p> <p>I/M EFFECTIVENESS : 1 1 1</p> <p>> Evaporative I/M: 2025 eval; 2000 start; GC (all HDG) I/M PROGRAM : 3 2000 2050 1 TRC GC I/M MODEL YEARS : 3 2001 2023 I/M VEHICLES : 3 11111 22222222 2 I/M COMPLIANCE : 3 96 I/M WAIVER RATES : 3 3 3</p> <p>> Evaporative I/M: 2025 eval; 2000 start; EVAP OBD & GC (LDG 96+) I/M PROGRAM : 4 2000 2050 1 TRC EVAP OBD & GC I/M MODEL YEARS : 4 2001 2023 I/M VEHICLES : 4 22222 11111111 1 I/M COMPLIANCE : 4 96 I/M WAIVER RATES : 4 3 3</p>

Table 34
2025 Exhaust and Evaporative I/M setups for HGA Urban County Ratio Calculation to get May 1 start (actual Urban County start year is 2003) input to RATEADJ62

<p>* 2025 Exhaust and Evaporative I/M setups for * HGA Urban County Ratio Calculation to get May 1 start * (actual Urban County start year is 2003)</p> <p>> Exhaust I/M: 2025 eval; 2004 start; 2500/IDLE (all HDG) I/M PROGRAM : 1 2004 2050 1 TRC 2500/IDLE I/M MODEL YEARS : 1 2001 2023 I/M VEHICLES : 1 11111 22222222 2 I/M STRINGENCY : 1 20 I/M COMPLIANCE : 1 96 I/M WAIVER RATES : 1 3 3</p> <p>> Exhaust I/M: 2025 eval; 2004 start; OBD I/M (LDG 96+)</p>
--

I/M PROGRAM	: 2 2004 2050 1 TRC OBD I/M
I/M MODEL YEARS	: 2 2001 2023
I/M VEHICLES	: 2 22222 11111111 1
I/M STRINGENCY	: 2 20
I/M COMPLIANCE	: 2 96
I/M WAIVER RATES	: 2 3 3
I/M EFFECTIVENESS	: 1 1 1
> Evaporative I/M: 2025 eval; 2000 start; GC (all HDG)	
I/M PROGRAM	: 3 2000 2050 1 TRC GC
I/M MODEL YEARS	: 3 2001 2023
I/M VEHICLES	: 3 11111 22222222 2
I/M COMPLIANCE	: 3 96
I/M WAIVER RATES	: 3 3 3
> Evaporative I/M: 2025 eval; 2000 start; EVAP OBD & GC (LDG 96+)	
I/M PROGRAM	: 4 2000 2050 1 TRC EVAP OBD & GC
I/M MODEL YEARS	: 4 2001 2023
I/M VEHICLES	: 4 22222 11111111 1
I/M COMPLIANCE	: 4 96
I/M WAIVER RATES	: 4 3 3

Table 35
2035 Exhaust and Evaporative I/M setups for Harris County input to RATEADJ62

* 2035 Exhaust and Evaporative I/M setups for Harris County	
> Exhaust I/M: 2035; 2500/IDLE (all HDG)	
I/M PROGRAM	: 1 1997 2050 1 TRC 2500/IDLE
I/M MODEL YEARS	: 1 2011 2033
I/M VEHICLES	: 1 11111 22222222 2
I/M STRINGENCY	: 1 20
I/M COMPLIANCE	: 1 96
I/M WAIVER RATES	: 1 3 3
> Exhaust I/M: 2035; OBD I/M (LDG 96+)	
I/M PROGRAM	: 2 1997 2050 1 TRC OBD I/M
I/M MODEL YEARS	: 2 2011 2033
I/M VEHICLES	: 2 22222 11111111 1
I/M STRINGENCY	: 2 20
I/M COMPLIANCE	: 2 96
I/M WAIVER RATES	: 2 3 3
I/M EFFECTIVENESS	: 1 1 1
> Evaporative I/M: 2035: GC (all HDG)	
I/M PROGRAM	: 3 1997 2050 1 TRC GC
I/M MODEL YEARS	: 3 2011 2033
I/M VEHICLES	: 3 11111 22222222 2
I/M COMPLIANCE	: 3 96
I/M WAIVER RATES	: 3 3 3
> Evaporative I/M: 2035: EVAP OBD & GC (LDG 96+)	
I/M PROGRAM	: 4 1997 2050 1 TRC EVAP OBD & GC

I/M MODEL YEARS	: 4 2011 2033
I/M VEHICLES	: 4 22222 11111111 1
I/M COMPLIANCE	: 4 96
I/M WAIVER RATES	: 4 3 3

Table 36

2035 Exhaust and Evaporative I/M setups for HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery input to RATEADJ62

* 2035 Exhaust and Evaporative I/M setups for	
* HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery	
> Exhaust I/M: 2035 eval; 2003 start; 2500/IDLE (all HDG)	
I/M PROGRAM	: 1 2003 2050 1 TRC 2500/IDLE
I/M MODEL YEARS	: 1 2011 2033
I/M VEHICLES	: 1 11111 22222222 2
I/M STRINGENCY	: 1 20
I/M COMPLIANCE	: 1 96
I/M WAIVER RATES	: 1 3 3
> Exhaust I/M: 2035 eval; 2003 start; OBD I/M (LDG 96+)	
I/M PROGRAM	: 2 2003 2050 1 TRC OBD I/M
I/M MODEL YEARS	: 2 2011 2033
I/M VEHICLES	: 2 22222 11111111 1
I/M STRINGENCY	: 2 20
I/M COMPLIANCE	: 2 96
I/M WAIVER RATES	: 2 3 3
I/M EFFECTIVENESS : 1 1 1	
> Evaporative I/M: 2035 eval; 2000 start; GC (all HDG)	
I/M PROGRAM	: 3 2000 2050 1 TRC GC
I/M MODEL YEARS	: 3 2011 2033
I/M VEHICLES	: 3 11111 22222222 2
I/M COMPLIANCE	: 3 96
I/M WAIVER RATES	: 3 3 3
> Evaporative I/M: 2035 eval; 2000 start; EVAP OBD & GC (LDG 96+)	
I/M PROGRAM	: 4 2000 2050 1 TRC EVAP OBD & GC
I/M MODEL YEARS	: 4 2011 2033
I/M VEHICLES	: 4 22222 11111111 1
I/M COMPLIANCE	: 4 96
I/M WAIVER RATES	: 4 3 3

Table 37
2035 Exhaust and Evaporative I/M setups for HGA Urban County Ratio Calculation to get May 1 start (actual Urban County start year is 2003) input to RATEADJ62

<p>* 2035 Exhaust and Evaporative I/M setups for * HGA Urban County Ratio Calculation to get May 1 start * (actual Urban County start year is 2003)</p> <p>> Exhaust I/M: 2035 eval; 2004 start; 2500/IDLE (all HDG) I/M PROGRAM : 1 2004 2050 1 TRC 2500/IDLE I/M MODEL YEARS : 1 2011 2033 I/M VEHICLES : 1 11111 22222222 2 I/M STRINGENCY : 1 20 I/M COMPLIANCE : 1 96 I/M WAIVER RATES : 1 3 3</p> <p>> Exhaust I/M: 2035 eval; 2004 start; OBD I/M (LDG 96+) I/M PROGRAM : 2 2004 2050 1 TRC OBD I/M I/M MODEL YEARS : 2 2011 2033 I/M VEHICLES : 2 22222 11111111 1 I/M STRINGENCY : 2 20 I/M COMPLIANCE : 2 96 I/M WAIVER RATES : 2 3 3</p> <p>I/M EFFECTIVENESS : 1 1 1</p> <p>> Evaporative I/M: 2035 eval; 2000 start; GC (all HDG) I/M PROGRAM : 3 2000 2050 1 TRC GC I/M MODEL YEARS : 3 2011 2033 I/M VEHICLES : 3 11111 22222222 2 I/M COMPLIANCE : 3 96 I/M WAIVER RATES : 3 3 3</p> <p>> Evaporative I/M: 2035 eval; 2000 start; EVAP OBD & GC (LDG 96+) I/M PROGRAM : 4 2000 2050 1 TRC EVAP OBD & GC I/M MODEL YEARS : 4 2011 2033 I/M VEHICLES : 4 22222 11111111 1 I/M COMPLIANCE : 4 96 I/M WAIVER RATES : 4 3 3</p>
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Table 38
HGA Counties ATP: 2009, 2019, 2025, 2035
MOBILE6 Command and Data Parameter Values input to RATEADJ62

<p>2009-ATP inputs: Harris County: ATP2: 84 85 07 22222 22222222 2 11 096. 22112222 Urban Counties: ATP2: 03 85 07 22222 22222222 2 11 096. 22112222</p>
<p>2019-ATP inputs: Harris County: ATP2: 84 95 17 22222 22222222 2 11 096. 22112222 Urban Counties: ATP2: 03 95 17 22222 22222222 2 11 096. 22112222</p>
<p>2025-ATP inputs: Harris County: ATP2: 84 01 23 22222 22222222 2 11 096. 22112222 Urban Counties: ATP2: 03 01 23 22222 22222222 2 11 096. 22112222</p>
<p>2035-ATP inputs: Harris County: ATP2: 84 11 33 22222 22222222 2 11 096. 22112222 Urban Counties: ATP2: 03 11 33 22222 22222222 2 11 096. 22112222</p>

Table 39
Mobile6 Fuels

Command	Function/Description	Input Parameter Source/Value
FUEL PROGRAM	Allows specification of one of four options: 1) Conventional Gasoline East Tier2 sulfur phase-in schedule (includes Texas); 2) RFG; 3) Conventional Gasoline West Tier2 sulfur geographical phase-in area schedule; or 4) Sulfur content for gasoline after 1999.	Option 4: applied to control strategy analyses; sulfur content values from MOBILE6 RFG summer program default.
SULFUR CONTENT	Allows alternate sulfur content for conventional gasoline through calendar year 1999.	NOT APPLIED. (MOBILE6 default assumed.)
DIESEL SULFUR	Allows alternate diesel sulfur levels for all calendar years, for PARTICULATES. No affect on HC, CO, NOx, air toxics (except if calculated as ratio to PM).	NOT APPLIED.
OXYGENATED FUELS	Allows modeling of oxygenated gasoline effects on exhaust for all gasoline-fueled vehicle types. Not for use with AIR TOXICS command.	Used MOBILE6 RFG summer values.
FUEL RVP	Allows user to specify fuel RVP for area being modeled (required to run model).	Applied: 6.8 psi.

SEASON	Identifies effective season for RFG calculation regardless of month modeled.	NOT APPLIED.
GAS AROMATIC%	Only when AIR TOXICS command is used.	NOT APPLIED.
GAS OLEFIN%	Only when AIR TOXICS command is used.	NOT APPLIED.
GAS BENZENE%	Only when AIR TOXICS command is used.	NOT APPLIED.
E200	Only when AIR TOXICS command is used.	NOT APPLIED.
E300	Only when AIR TOXICS command is used.	NOT APPLIED.
OXYGENATE	Only when AIR TOXICS command is used.	NOT APPLIED.
RVP OXY WAIVER	Only when AIR TOXICS command is used.	NOT APPLIED.

Table40
MOBILE6 Alternative Emissions Regulations and Control Measures

Command	Function/Description	Input Parameter Source/Value
NO CLEAN AIR ACT	Models vehicle emissions as if the Federal Clean Air Act Amendments of 1990 had not been implemented.	NOT APPLIED
<u>HDDV NOx Off Cycle Emissions Effects:</u> NO DEFEAT DEVICE	Turns off effects of HDD vehicle NOx offcycle emissions effects (defeat device emissions).	NOT APPLIED.
NO NOX PULL AHEAD	Turns off HDD NOx emissions reduction effects of pull- ahead program.	NOT APPLIED.
NO REBUILD	Turns off HDD NOx emissions reduction effects of rebuild program.	NOT APPLIED.
REBUILD EFFECTS	Allows user change rebuild program effectiveness rate.	Applied. MOBILE6 default (0.90) was assumed for affected analyses.
<u>Tier 2 Emission Standards and Fuel Requirements:</u> NO TIER2 T2 EXH PHASE-IN T2 EVAP PHASE-IN T2 CERT	Allow the overriding of the default Tier 2 emissions standards and fuel requirements settings. Disables Tier 2 requirements. Allows alternate Tier 2 exhaust standard phase-in schedules. Allows alternate Tier 2 evaporative standard phase-in schedules. Allows user to specify alternate Tier 2 50,000-mile certification standards.	NOT APPLIED.
94+ LDG IMPLEMENTATION	Allows use of alternate 1994 and later fleet penetration fractions for LDGVs under the	NOT APPLIED.

	Tier 1, NLEV (or California LEV 1), and Tier 2 emissions standard programs.	
NO 2007 HDDV RULE	Disables 2007 HDV emissions standards.	NOT APPLIED.

**Table 41
Composite Vehicle Classes and Data Sources for Vehicle Age Distributions (REG DIST Command)**

Number	Abbreviation	Description	Source of Distributions
1	LDV	Light-Duty Vehicles	TxDOT July 2006 HGA County Registrations
2	LDT1	Light-Duty Trucks 1	TxDOT July 2006 HGA County Registrations
3	LDT2	Light-Duty Trucks 2	TxDOT July 2006 HGA County Registrations
4	LDT3	Light-Duty Trucks 3	TxDOT July 2006 HGA County Registrations
5	LDT4	Light-Duty Trucks 4	TxDOT July 2006 HGA County Registrations
6	HDV2B	Class 2b Heavy-Duty Vehicles	TxDOT July 2006 HGA County Registrations
7	HDV3	Class 3 Heavy-Duty Vehicles	TxDOT July 2006 HGA County Registrations
8	HDV4	Class 4 Heavy-Duty Vehicles	TxDOT July 2006 HGA County Registrations
9	HDV5	Class 5 Heavy-Duty Vehicles	TxDOT July 2006 HGA County Registrations
10	HDV6	Class 6 Heavy-Duty Vehicles	TxDOT July 2006 HGA County Registrations
11	HDV7	Class 7 Heavy-Duty Vehicles	TxDOT July 2006 HGA County Registrations
12	HDV8A	Class 8a Heavy-Duty Vehicles	TxDOT July 2006 HGA County Registrations
13	HDV8B	Class 8b Heavy-Duty Vehicles	TxDOT July 2006 HGA County Registrations
14	HDBS	School Buses	MOBILE6 Defaults
15	HDBT	Transit and Urban Buses	MOBILE6 Defaults
16	MC	Motorcycles	TxDOT July 2006 HGA County Registrations

These 2006 registrations have been used for 2007, 2009, 2019, 2025 and 2035 future years.

Table 42
Source of Diesel Fractions for Composite Vehicle Types (DIESEL FRACTIONS Command)

Number¹	Abbreviation	Description	Source of Fractions
1	LDV	Light-Duty Vehicles	EPA MOBILE6 Evaluation Year Default
2	LDT1	Light-Duty Trucks 1	EPA MOBILE6 Evaluation Year Default
3	LDT2	Light-Duty Trucks 2	EPA MOBILE6 Evaluation Year Default
4	LDT3	Light-Duty Trucks 3	EPA MOBILE6 Evaluation Year Default
5	LDT4	Light-Duty Trucks 4	EPA MOBILE6 Evaluation Year Default
6	HDV2B	Class 2b Heavy-Duty Vehicles	TxDOT July 2008 HGA Region Registrations for all years.
7	HDV3	Class 3 Heavy-Duty Vehicles	TxDOT July 2008 HGA Region Registrations for all years.
8	HDV4	Class 4 Heavy-Duty Vehicles	TxDOT July 2008 HGA Region Registrations for all years.
9	HDV5	Class 5 Heavy-Duty Vehicles	TxDOT July 2008 HGA Region Registrations for all years.
10	HDV6	Class 6 Heavy-Duty Vehicles	TxDOT July 2008 HGA Region Registrations for all years.
11	HDV7	Class 7 Heavy-Duty Vehicles	TxDOT July 2008 HGA Region Registrations for all years.
12	HDV8A	Class 8a Heavy-Duty Vehicles	TxDOT July 2008 HGA Region Registrations for all years.
13	HDV8B	Class 8b Heavy-Duty Vehicles	TxDOT July 2008 HGA Region Registrations for all years.
14	HDBS	School Buses	TxDOT July 2008 HGA Region Registrations for all years.

¹. MOBILE6 input sequence.

Table 43
HGAC TDM Functional Classification Groupings
for Application of VMT Mix and MOBILE6 Drive Cycle Emissions Factors

MOBILE6 Drive Cycle	TDM Functional Classification	VMT Mix
Freeway	Urban Interstate	Freeway
	Urban Other Freeway	
	Rural Interstate	
	Rural Other Freeway	
	Toll Roads	
Ramp	Ramps (Freeway, Toll Roads, Frontage)	
Arterial	Urban Principal Arterial	Arterial
	Urban Other Arterial	
	Rural Principal Arterial	
	Rural Other Arterial	
	Urban Collector	Collector
	Rural Major Collector	
	Rural Collector	
	Local (Centroid Connector)	
	Local (Intrazonal)	

Table 44
HGA 2009 Weekday VMT Mix by Time Period and Roadway Functional Classification Group input to IMPSUM62

Obs	TP	FC	P_LDGV	P_LDGT1	P_LDGT2	P_LDGT3	P_LDGT4	P_HDGV2b	P_HDGV_3	P_HDGV_4	P_HDGV_5
1	AM_Peak	Art	0.6109645	0.049546	0.164939	0.064666	0.029737	0.007576	0.0019544	0.000549	0.0001976
2	AM_Peak	Col	0.5171901	0.0539716	0.179672	0.073968	0.034015	0.011237	0.0028989	0.0008143	0.0002931
3	AM_Peak	Fwy	0.6397411	0.0476682	0.158688	0.06121	0.028149	0.006456	0.0016654	0.0004678	0.0001684
4	Mid_Day	Art	0.5737296	0.0470381	0.156591	0.061476	0.028271	0.012589	0.0032477	0.0009123	0.0003284
5	Mid_Day	Col	0.4973844	0.0516778	0.172036	0.070842	0.032578	0.015597	0.0040236	0.0011302	0.0004069
6	Mid_Day	Fwy	0.6123537	0.0455928	0.151779	0.058574	0.026936	0.010104	0.0026065	0.0007322	0.0002636
7	Ovr_Nite	Art	0.6106193	0.0500989	0.16678	0.06533	0.030043	0.005376	0.0013867	0.0003895	0.0001402
8	Ovr_Nite	Col	0.5446443	0.0575122	0.191459	0.078694	0.036189	0.006621	0.0017081	0.0004798	0.0001727
9	Ovr_Nite	Fwy	0.6288728	0.0467082	0.155492	0.059896	0.027544	0.004874	0.0012574	0.0003532	0.0001272
10	PM_Peak	Art	0.6121047	0.050263	0.167326	0.065692	0.03021	0.007298	0.0018826	0.0005288	0.0001904
11	PM_Peak	Col	0.5416219	0.0567171	0.188812	0.077693	0.035728	0.00858	0.0022135	0.0006218	0.0002238
12	PM_Peak	Fwy	0.6425868	0.0479001	0.15946	0.061608	0.028332	0.005683	0.001466	0.0004118	0.0001482

Tuesday May 19, 2009

Obs	P_HDGV_6	P_HDGV_7	P_HDGV8a	P_HDGV8b	P_LDDV	P_LDDT12	P_HDDV2b	P_HDDV_3	P_HDDV_4	P_HDDV_5
1	0.0003953	0.0001098	0.0001757	0.000022	0.0005599	0.0000079	0.0174991	0.004237	0.0019979	0.0017568
2	0.0005863	0.0001629	0.0002606	0.0000326	0.0004741	0.0000086	0.0325174	0.0078733	0.0037126	0.0032645
3	0.0003368	0.0000936	0.0001497	0.0000187	0.0005862	0.0000076	0.0124498	0.0030144	0.0014214	0.0012499
4	0.0006568	0.0001825	0.0002919	0.0000365	0.0005258	0.0000075	0.0286152	0.0069285	0.0032671	0.0028728
5	0.0008138	0.000226	0.0003617	0.0000452	0.000456	0.0000082	0.0449122	0.0108744	0.0051278	0.0045089
6	0.0005272	0.0001464	0.0002343	0.0000293	0.0005612	0.0000073	0.0193647	0.0046887	0.0022109	0.0019441
7	0.0002805	0.0000779	0.0001247	0.0000156	0.0005596	0.000008	0.0123692	0.0029949	0.0014122	0.0012418
8	0.0003455	0.000096	0.0001535	0.0000192	0.0004992	0.0000092	0.0194435	0.0047078	0.0022199	0.001952
9	0.0002543	0.0000706	0.000113	0.0000141	0.0005763	0.0000074	0.0093853	0.0022724	0.0010716	0.0009422

Obs	P_HDGV_6	P_HDGV_7	P_HDGV8a	P_HDGV8b	P_LDDV	P_LDDT12	P_HDDV2b	P_HDDV_3	P_HDDV_4	P_HDDV_5
10	0.0003807	0.0001058	0.0001692	0.0000212	0.000561	0.000008	0.0167399	0.0040532	0.0019113	0.0016806
11	0.0004477	0.0001244	0.000199	0.0000249	0.0004965	0.000009	0.0252519	0.0061141	0.0028831	0.0025351
12	0.0002965	0.0000824	0.0001318	0.0000165	0.0005888	0.0000076	0.0109615	0.0026541	0.0012515	0.0011005

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Obs	P_HDDV_6	P_HDDV_7	P_HDDV8a	P_HDDV8b	P_MC	P_HDGB	P_HDDBT	P_HDDBS	P_LDDT34
1	0.0040303	0.0015501	0.0033758	0.0272125	0.001	0.0003352	0.0015742	0.0029573	0.0010734
2	0.0074892	0.0028805	0.006273	0.0481422	0.001	0.0006953	0.0032647	0.0061329	0.0011693
3	0.0028674	0.0011028	0.0024017	0.0238495	0.001	0.0002896	0.0013599	0.0025547	0.0010327
4	0.0065905	0.0025348	0.0055203	0.0538153	0.001	0.0001346	0.0006319	0.0011871	0.001019
5	0.010344	0.0039784	0.0086642	0.0578008	0.001	0.0002812	0.0013206	0.0024809	0.0011196
6	0.00446	0.0017154	0.0037357	0.0470739	0.001	0.0001634	0.0007673	0.0014415	0.0009877
7	0.0028488	0.0010957	0.0023862	0.0404617	0.001	0.0001291	0.0006064	0.0011391	0.0010854
8	0.0044781	0.0017224	0.0037509	0.0363693	0.001	0.0003105	0.001458	0.0027388	0.001246
9	0.0021616	0.0008314	0.0018106	0.0505777	0.001	0.0001911	0.0008973	0.0016856	0.0010119
10	0.0038555	0.0014829	0.0032294	0.0245462	0.001	0.0002529	0.0011876	0.0022309	0.0010889
11	0.0058159	0.0022369	0.0048714	0.026069	0.001	0.0005842	0.0027431	0.005153	0.0012287
12	0.0025246	0.000971	0.0021146	0.0240838	0.001	0.0002467	0.0011585	0.0021763	0.0010377

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Table 45
HGA 2019 Weekday VMT Mix by Time Period and Roadway Functional Classification Group input to IMPSUM62

Obs	TP	FC	P_LDGV	P_LDGT1	P_LDGT2	P_LDGT3	P_LDGT4	P_HDGV2b	P_HDGV_3	P_HDGV_4	P_HDGV_5
1	AM_Peak	Art	0.6109738	0.0495462	0.1649382	0.064666	0.0297369	0.0075762	0.0019544	0.000549	0.0001976
2	AM_Peak	Col	0.517198	0.0539719	0.1796711	0.0739681	0.0340145	0.0112373	0.0028989	0.0008143	0.0002931
3	AM_Peak	Fwy	0.6397509	0.0476685	0.1586872	0.0612107	0.028148	0.0064556	0.0016654	0.0004678	0.0001684
4	Mid_Day	Art	0.5737384	0.0470384	0.1565896	0.061476	0.02827	0.0125893	0.0032477	0.0009123	0.0003284
5	Mid_Day	Col	0.497392	0.0516781	0.172035	0.0708428	0.0325773	0.015597	0.0040236	0.0011302	0.0004069
6	Mid_Day	Fwy	0.6123631	0.045593	0.151778	0.058574	0.0269355	0.0101039	0.0026065	0.0007322	0.0002636
7	Ovr_Nite	Art	0.6106286	0.0500992	0.166779	0.0653306	0.0300425	0.0053756	0.0013867	0.0003895	0.0001402
8	Ovr_Nite	Col	0.5446527	0.0575125	0.1914578	0.0786948	0.0361881	0.0066213	0.0017081	0.0004798	0.0001727
9	Ovr_Nite	Fwy	0.6288824	0.0467085	0.1554912	0.0598967	0.0275437	0.0048741	0.0012574	0.0003532	0.0001272
10	PM_Peak	Art	0.6121141	0.0502633	0.1673251	0.0656927	0.0302091	0.0072977	0.0018826	0.0005288	0.0001904
11	PM_Peak	Col	0.5416303	0.0567175	0.188811	0.0776936	0.0357277	0.0085804	0.0022135	0.0006218	0.0002238
12	PM_Peak	Fwy	0.6425967	0.0479004	0.1594591	0.0616088	0.0283311	0.0056826	0.001466	0.0004118	0.0001482

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Obs	P_HDGV_6	P_HDGV_7	P_HDGV8a	P_HDGV8b	P_LDDV	P_LDDT12	P_HDDV2b	P_HDDV_3	P_HDDV_4	P_HDDV_5
1	0.0003953	0.0001098	0.0001757	0.000022	0.0005505	0	0.0174991	0.004237	0.0019979	0.0017568
2	0.0005863	0.0001629	0.0002606	0.0000326	0.0004662	0	0.0325174	0.0078733	0.0037126	0.0032645
3	0.0003368	0.0000936	0.0001497	0.0000187	0.0005764	0	0.0124498	0.0030144	0.0014214	0.0012499
4	0.0006568	0.0001825	0.0002919	0.0000365	0.000517	0	0.0286152	0.0069285	0.0032671	0.0028728
5	0.0008138	0.000226	0.0003617	0.0000452	0.0004484	0	0.0449122	0.0108744	0.0051278	0.0045089
6	0.0005272	0.0001464	0.0002343	0.0000293	0.0005518	0	0.0193647	0.0046887	0.0022109	0.0019441
7	0.0002805	0.0000779	0.0001247	0.0000156	0.0005502	0	0.0123692	0.0029949	0.0014122	0.0012418
8	0.0003455	0.000096	0.0001535	0.0000192	0.0004909	0	0.0194435	0.0047078	0.0022199	0.001952

Obs	P_HDGV_6	P_HDGV_7	P_HDGV8a	P_HDGV8b	P_LDDV	P_LDDT12	P_HDDV2b	P_HDDV_3	P_HDDV_4	P_HDDV_5
9	0.0002543	0.0000706	0.000113	0.0000141	0.0005666	0	0.0093853	0.0022724	0.0010716	0.0009422
10	0.0003807	0.0001058	0.0001692	0.0000212	0.0005516	0	0.0167399	0.0040532	0.0019113	0.0016806
11	0.0004477	0.0001244	0.000199	0.0000249	0.0004882	0	0.0252519	0.0061141	0.0028831	0.0025351
12	0.0002965	0.0000824	0.0001318	0.0000165	0.000579	0	0.0109615	0.0026541	0.0012515	0.0011005

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Obs	P_HDDV_6	P_HDDV_7	P_HDDV8a	P_HDDV8b	P_MC	P_HDGB	P_HDDBT	P_HDDBS	P_LDDT34
1	0.0040303	0.0015501	0.0033758	0.0272125	0.001	0.0001552	0.0015789	0.0031327	0.001082
2	0.0074892	0.0028805	0.006273	0.0481422	0.001	0.0003218	0.0032744	0.0064967	0.0011786
3	0.0028674	0.0011028	0.0024017	0.0238495	0.001	0.0001341	0.0013639	0.0027062	0.001041
4	0.0065905	0.0025348	0.0055203	0.0538153	0.001	0.0000623	0.0006338	0.0012575	0.0010272
5	0.010344	0.0039784	0.0086642	0.0578008	0.001	0.0001302	0.0013245	0.002628	0.0011285
6	0.00446	0.0017154	0.0037357	0.0470739	0.001	0.0000756	0.0007696	0.001527	0.0009957
7	0.0028488	0.0010957	0.0023862	0.0404617	0.001	0.0000598	0.0006081	0.0012066	0.0010941
8	0.0044781	0.0017224	0.0037509	0.0363693	0.001	0.0001437	0.0014623	0.0029013	0.001256
9	0.0021616	0.0008314	0.0018106	0.0505777	0.001	0.0000885	0.0009	0.0017856	0.00102
10	0.0038555	0.0014829	0.0032294	0.0245462	0.001	0.0001171	0.0011911	0.0023633	0.0010977
11	0.0058159	0.0022369	0.0048714	0.026069	0.001	0.0002704	0.0027512	0.0054587	0.0012386
12	0.0025246	0.000971	0.0021146	0.0240838	0.001	0.0001142	0.001162	0.0023054	0.001046

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Table 46
HGA 2025 Weekday VMT Mix by Time Period and Roadway Functional Classification Group input to IMPSUM62

Obs	TP	FC	P_LDGV	P_LDGT1	P_LDGT2	P_LDGT3	P_LDGT4	P_HDGV2b	P_HDGV_3	P_HDGV_4	P_HDGV_5
1	AM_Peak	Art	0.6109732	0.0495458	0.1649368	0.0646653	0.0297376	0.0075762	0.0019544	0.000549	0.0001976
2	AM_Peak	Col	0.5171974	0.0539714	0.1796696	0.0739673	0.0340153	0.0112373	0.0028989	0.0008143	0.0002931
3	AM_Peak	Fwy	0.6397502	0.0476681	0.1586859	0.06121	0.0281486	0.0064556	0.0016654	0.0004678	0.0001684
4	Mid_Day	Art	0.5737377	0.047038	0.1565883	0.0614754	0.0282707	0.0125893	0.0032477	0.0009123	0.0003284
5	Mid_Day	Col	0.4973915	0.0516776	0.1720336	0.070842	0.0325781	0.015597	0.0040236	0.0011302	0.0004069
6	Mid_Day	Fwy	0.6123624	0.0455926	0.1517767	0.0585734	0.0269361	0.0101039	0.0026065	0.0007322	0.0002636
7	Ovr_Nite	Art	0.610628	0.0500988	0.1667776	0.0653299	0.0300432	0.0053756	0.0013867	0.0003895	0.0001402
8	Ovr_Nite	Col	0.5446521	0.057512	0.1914561	0.078694	0.036189	0.0066213	0.0017081	0.0004798	0.0001727
9	Ovr_Nite	Fwy	0.6288817	0.046708	0.1554899	0.0598961	0.0275444	0.0048741	0.0012574	0.0003532	0.0001272
10	PM_Peak	Art	0.6121134	0.0502628	0.1673237	0.065692	0.0302098	0.0072977	0.0018826	0.0005288	0.0001904
11	PM_Peak	Col	0.5416297	0.056717	0.1888094	0.0776928	0.0357286	0.0085804	0.0022135	0.0006218	0.0002238
12	PM_Peak	Fwy	0.6425959	0.0478999	0.1594577	0.0616082	0.0283317	0.0056826	0.001466	0.0004118	0.0001482

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Obs	P_HDGV_6	P_HDGV_7	P_HDGV8a	P_HDGV8b	P_LDDV	P_LDDT12	P_HDDV2b	P_HDDV_3	P_HDDV_4	P_HDDV_5
1	0.0003953	0.0001098	0.0001757	0.000022	0.0005512	0	0.0174991	0.004237	0.0019979	0.0017568
2	0.0005863	0.0001629	0.0002606	0.0000326	0.0004667	0	0.0325174	0.0078733	0.0037126	0.0032645
3	0.0003368	0.0000936	0.0001497	0.0000187	0.0005771	0	0.0124498	0.0030144	0.0014214	0.0012499
4	0.0006568	0.0001825	0.0002919	0.0000365	0.0005177	0	0.0286152	0.0069285	0.0032671	0.0028728
5	0.0008138	0.000226	0.0003617	0.0000452	0.0004489	0	0.0449122	0.0108744	0.0051278	0.0045089
6	0.0005272	0.0001464	0.0002343	0.0000293	0.0005525	0	0.0193647	0.0046887	0.0022109	0.0019441
7	0.0002805	0.0000779	0.0001247	0.0000156	0.0005509	0	0.0123692	0.0029949	0.0014122	0.0012418
8	0.0003455	0.000096	0.0001535	0.0000192	0.0004915	0	0.0194435	0.0047078	0.0022199	0.001952
9	0.0002543	0.0000706	0.000113	0.0000141	0.0005673	0	0.0093853	0.0022724	0.0010716	0.0009422

Obs	P_HDGV_6	P_HDGV_7	P_HDGV8a	P_HDGV8b	P_LDDV	P_LDDT12	P_HDDV2b	P_HDDV_3	P_HDDV_4	P_HDDV_5
10	0.0003807	0.0001058	0.0001692	0.0000212	0.0005522	0	0.0167399	0.0040532	0.0019113	0.0016806
11	0.0004477	0.0001244	0.000199	0.0000249	0.0004888	0	0.0252519	0.0061141	0.0028831	0.0025351
12	0.0002965	0.0000824	0.0001318	0.0000165	0.0005797	0	0.0109615	0.0026541	0.0012515	0.0011005

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Obs	P_HDDV_6	P_HDDV_7	P_HDDV8a	P_HDDV8b	P_MC	P_HDGB	P_HDDBT	P_HDDBS	P_LDDT34
1	0.0040303	0.0015501	0.0033758	0.0272125	0.001	0.0001363	0.0015831	0.0031474	0.0010838
2	0.0074892	0.0028805	0.006273	0.0481422	0.001	0.0002827	0.003283	0.0065271	0.0011806
3	0.0028674	0.0011028	0.0024017	0.0238495	0.001	0.0001178	0.0013676	0.0027189	0.0010427
4	0.0065905	0.0025348	0.0055203	0.0538153	0.001	0.0000547	0.0006355	0.0012634	0.001029
5	0.010344	0.0039784	0.0086642	0.0578008	0.001	0.0001144	0.001328	0.0026403	0.0011305
6	0.00446	0.0017154	0.0037357	0.0470739	0.001	0.0000664	0.0007716	0.0015341	0.0009973
7	0.0028488	0.0010957	0.0023862	0.0404617	0.001	0.0000525	0.0006098	0.0012123	0.0010959
8	0.0044781	0.0017224	0.0037509	0.0363693	0.001	0.0001262	0.0014661	0.0029149	0.0012581
9	0.0021616	0.0008314	0.0018106	0.0505777	0.001	0.0000777	0.0009023	0.001794	0.0010217
10	0.0038555	0.0014829	0.0032294	0.0245462	0.001	0.0001028	0.0011943	0.0023743	0.0010995
11	0.0058159	0.0022369	0.0048714	0.026069	0.001	0.0002375	0.0027585	0.0054843	0.0012407
12	0.0025246	0.000971	0.0021146	0.0240838	0.001	0.0001003	0.001165	0.0023162	0.0010478

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Table 47
HGA 2035 Weekday VMT Mix by Time Period and Roadway Functional Classification Group input to IMPSUM62

Obs	TP	FC	P_LDGV	P_LDGT1	P_LDGT2	P_LDGT3	P_LDGT4	P_HDGV2b	P_HDGV_3	P_HDGV_4	P_HDGV_5
1	AM_Peak	Art	0.6109732	0.0495458	0.1649368	0.0646653	0.0297376	0.0075762	0.0019544	0.000549	0.0001976
2	AM_Peak	Col	0.5171974	0.0539714	0.1796696	0.0739673	0.0340153	0.0112373	0.0028989	0.0008143	0.0002931
3	AM_Peak	Fwy	0.6397502	0.0476681	0.1586859	0.06121	0.0281486	0.0064556	0.0016654	0.0004678	0.0001684
4	Mid_Day	Art	0.5737377	0.047038	0.1565883	0.0614754	0.0282707	0.0125893	0.0032477	0.0009123	0.0003284
5	Mid_Day	Col	0.4973915	0.0516776	0.1720336	0.070842	0.0325781	0.015597	0.0040236	0.0011302	0.0004069
6	Mid_Day	Fwy	0.6123624	0.0455926	0.1517767	0.0585734	0.0269361	0.0101039	0.0026065	0.0007322	0.0002636
7	Ovr_Nite	Art	0.610628	0.0500988	0.1667776	0.0653299	0.0300432	0.0053756	0.0013867	0.0003895	0.0001402
8	Ovr_Nite	Col	0.5446521	0.057512	0.1914561	0.078694	0.036189	0.0066213	0.0017081	0.0004798	0.0001727
9	Ovr_Nite	Fwy	0.6288817	0.046708	0.1554899	0.0598961	0.0275444	0.0048741	0.0012574	0.0003532	0.0001272
10	PM_Peak	Art	0.6121134	0.0502628	0.1673237	0.065692	0.0302098	0.0072977	0.0018826	0.0005288	0.0001904
11	PM_Peak	Col	0.5416297	0.056717	0.1888094	0.0776928	0.0357286	0.0085804	0.0022135	0.0006218	0.0002238
12	PM_Peak	Fwy	0.6425959	0.0478999	0.1594577	0.0616082	0.0283317	0.0056826	0.001466	0.0004118	0.0001482

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Obs	P_HDGV_6	P_HDGV_7	P_HDGV8a	P_HDGV8b	P_LDDV	P_LDDT12	P_HDDV2b	P_HDDV_3	P_HDDV_4	P_HDDV_5
1	0.0003953	0.0001098	0.0001757	0.000022	0.0005512	0	0.0174991	0.004237	0.0019979	0.0017568
2	0.0005863	0.0001629	0.0002606	0.0000326	0.0004667	0	0.0325174	0.0078733	0.0037126	0.0032645
3	0.0003368	0.0000936	0.0001497	0.0000187	0.0005771	0	0.0124498	0.0030144	0.0014214	0.0012499
4	0.0006568	0.0001825	0.0002919	0.0000365	0.0005177	0	0.0286152	0.0069285	0.0032671	0.0028728
5	0.0008138	0.000226	0.0003617	0.0000452	0.0004489	0	0.0449122	0.0108744	0.0051278	0.0045089
6	0.0005272	0.0001464	0.0002343	0.0000293	0.0005525	0	0.0193647	0.0046887	0.0022109	0.0019441

Obs	P_HDGV_6	P_HDGV_7	P_HDGV8a	P_HDGV8b	P_LDDV	P_LDDT12	P_HDDV2b	P_HDDV_3	P_HDDV_4	P_HDDV_5
7	0.0002805	0.0000779	0.0001247	0.0000156	0.0005509	0	0.0123692	0.0029949	0.0014122	0.0012418
8	0.0003455	0.000096	0.0001535	0.0000192	0.0004915	0	0.0194435	0.0047078	0.0022199	0.001952
9	0.0002543	0.0000706	0.000113	0.0000141	0.0005673	0	0.0093853	0.0022724	0.0010716	0.0009422
10	0.0003807	0.0001058	0.0001692	0.0000212	0.0005522	0	0.0167399	0.0040532	0.0019113	0.0016806
11	0.0004477	0.0001244	0.000199	0.0000249	0.0004888	0	0.0252519	0.0061141	0.0028831	0.0025351
12	0.0002965	0.0000824	0.0001318	0.0000165	0.0005797	0	0.0109615	0.0026541	0.0012515	0.0011005

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Obs	P_HDDV_6	P_HDDV_7	P_HDDV8a	P_HDDV8b	P_MC	P_HDGB	P_HDDBT	P_HDDBS	P_LDDT34
1	0.0040303	0.0015501	0.0033758	0.0272125	0.001	0.0001363	0.0015831	0.0031474	0.0010838
2	0.0074892	0.0028805	0.006273	0.0481422	0.001	0.0002827	0.003283	0.0065271	0.0011806
3	0.0028674	0.0011028	0.0024017	0.0238495	0.001	0.0001178	0.0013676	0.0027189	0.0010427
4	0.0065905	0.0025348	0.0055203	0.0538153	0.001	0.0000547	0.0006355	0.0012634	0.001029
5	0.010344	0.0039784	0.0086642	0.0578008	0.001	0.0001144	0.001328	0.0026403	0.0011305
6	0.00446	0.0017154	0.0037357	0.0470739	0.001	0.0000664	0.0007716	0.0015341	0.0009973
7	0.0028488	0.0010957	0.0023862	0.0404617	0.001	0.0000525	0.0006098	0.0012123	0.0010959
8	0.0044781	0.0017224	0.0037509	0.0363693	0.001	0.0001262	0.0014661	0.0029149	0.0012581
9	0.0021616	0.0008314	0.0018106	0.0505777	0.001	0.0000777	0.0009023	0.001794	0.0010217
10	0.0038555	0.0014829	0.0032294	0.0245462	0.001	0.0001028	0.0011943	0.0023743	0.0010995
11	0.0058159	0.0022369	0.0048714	0.026069	0.001	0.0002375	0.0027585	0.0054843	0.0012407
12	0.0025246	0.000971	0.0021146	0.0240838	0.001	0.0001003	0.001165	0.0023162	0.0010478

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