

1. Report No. FHWA/TX-95/1375-6	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle DEVELOPMENT OF EMISSION ESTIMATES FOR THE CONFORMITY ANALYSIS OF THE JOHRTS FY-94 TIP AND MTP		5. Report Date January 1995	
		6. Performing Organization Code	
7. Author(s) Charles E. Bell, Jimmie D. Benson, and George B. Dresser		8. Performing Organization Report No. Research Report 1375-6	
9. Performing Organization Name and Address Texas Transportation Institute The Texas A&M University System College Station, Texas 77843-3135		10. Work Unit No. (TRAIS)	
		11. Contract or Grant No. Study No. 0-1375	
12. Sponsoring Agency Name and Address Texas Department of Transportation Research and Technology Transfer Office P. O. Box 5080 Austin, Texas 78763-5080		13. Type of Report and Period Covered Interim: April 1992 - January 1995	
		14. Sponsoring Agency Code	
15. Supplementary Notes Research performed in cooperation with the Texas Department of Transportation and the U.S. Department of Transportation, Federal Highway Administration Research Study Title: Develop Air Quality Data for Federal Submission			
16. Abstract This report documents the mobile source emission estimation methodology used for the conformity analysis of the Transportation Improvement Program (TIP) and the metropolitan transportation plan (MTP) for Jefferson and Orange Counties and a portion of Hardin County. Included in the report is a brief overview of the emission estimation methodology and the 24-hour traffic assignments used in the analyses; the methods used to estimate the seasonally adjusted time-of-day vehicle miles of travel and associated operating speeds; the estimation of the emission rates using the EPA's MOBILE5a program; and brief outlines of the method used to develop the emission estimates using the MOBILE5a emission rates and comparisons of the emission estimates for the Build and No-Build Options. An appendix presents the emission rates developed for conformity analysis.			
17. Key Words Mobile Source Emissions, Air Quality Analyses, Travel Models, Conformity Analyses		18. Distribution Statement No Restrictions. This document is available to the public through NTIS: National Technical Information Service 5285 Port Royal Road Springfield, Virginia 22161	
19. Security Classif.(of this report) Unclassified	20. Security Classif.(of this page) Unclassified	21. No. of Pages 422	22. Price

**DEVELOPMENT OF EMISSION ESTIMATES FOR THE
CONFORMITY ANALYSIS OF THE JOHRTS FY-94 TIP AND MTP**

by

Charles E. Bell
Systems Analyst
Texas Transportation Institute

Jimmie D. Benson
Research Engineer
Texas Transportation Institute

and

George B. Dresser
Research Scientist
Texas Transportation Institute

Research Report 1375-6
Research Study Number 0-1375
Research Study Title: Develop Air Quality Data for Federal Submission

Sponsored by the
Texas Department of Transportation
In Cooperation with
U.S. Department of Transportation
Federal Highway Administration

January 1995

TEXAS TRANSPORTATION INSTITUTE
The Texas A&M University System
College Station, Texas 77843-3135

IMPLEMENTATION STATEMENT

This report documents for the record the procedures used by the Texas Transportation Institute in support of the FY-94 conformity analysis for Jefferson and Orange Counties and a portion of Hardin County. The findings of the conformity analysis were previously submitted by the Metropolitan Planning Organization and Texas Department of Transportation to the Federal Highway Administration. The software used for these procedures is described in Research Report 1279-2, "User's Guide for the Texas Mobile Source Emission Estimation Software: PREPIN, POLFAC5A, COADJ, IMPSUM, and SUMALL." No further implementation of the materials in this report is needed.

The purpose of this report is primarily to document procedures supporting State Implementation Plan submittals produced for and in cooperation with the Texas Natural Resource Conservation Commission. The State Implementation Plan-related materials being submitted to the Environmental Protection Agency by the Texas Natural Resource Conservation Commission are prepared in English units. Because this report is primarily to document procedures supporting State Implementation Plan submittals, English units have been used to maintain consistency.

DISCLAIMER

The contents of this report reflect the views of the authors who are responsible for the opinions, findings, and conclusions presented herein. The contents do not necessarily reflect the official views or policies of the Texas Department of Transportation. This report does not constitute a standard, specification, or regulation. Additionally, this report is not intended for construction, bidding, or permit purposes. George B. Dresser, Ph.D., is the Principal Investigator for this project.

TABLE OF CONTENTS

LIST OF TABLES	x
SUMMARY	xi
I. INTRODUCTION	1
OVERVIEW OF EMISSION ESTIMATION METHODOLOGY	1
24-HOUR TRAFFIC ASSIGNMENTS	3
TRANSPORTATION PROJECTS	3
II. PROJECTION OF VEHICLE REGISTRATIONS	5
INPUT DATA	5
METHODOLOGY	5
III. ESTIMATION OF TIME-OF-DAY VMT AND SPEEDS	11
COUNTY SPECIFICATIONS	12
AREA TYPE SPECIFICATIONS	12
SEASONAL ADJUSTMENT FACTORS	13
Summer Seasonal Adjustment Factor Computations	13
TIME-OF-DAY TRAVEL FACTORS	14
TIME-OF-DAY DIRECTIONAL SPLIT ESTIMATES	14
TIME-OF-DAY CAPACITY FACTORS	18
FREEFLOW SPEED FACTORS	18
SPEED MODEL PARAMETERS	21
Other Data Inputs	22
IV. ESTIMATION OF EMISSION RATES USING MOBILE5a	23
ESTIMATION OF TEMPERATURES	23
MOBILE5a SET-UPS	25
EMISSION RATES	26
V. EMISSION ESTIMATES AND CONFORMITY	27
ESTIMATION OF TIME-OF-DAY EMISSIONS	27
ESTIMATION OF 24-HOUR EMISSIONS	28
APPLICATION OF THE CONFORMITY CRITERIA	32
Emission Inventories and Emission Budgets	32
Adjustments	33
Application of Conformity Criteria	35
APPENDIX A: MOBILE5a SET-UPS	A-1
APPENDIX B: MOBILE5a EMISSION RATES	B-1
APPENDIX C: SUMALL OUTPUT TABLES	C-1

LIST OF TABLES

I-1	24-Hour Traffic Assignments	3
II-1	Vehicle Estimates and Projections for JOHRTS	8
II-2	Vehicle Estimates for JOHRTS	9
III-1	Portions of Travel by Time Periods	14
III-2	Morning Peak-Period Directional Split Estimates for JOHRTS	16
III-3	Off-Peak Directional Split Estimates for JOHRTS	16
III-4	Afternoon Peak-Period Directional Split Estimates for JOHRTS	17
III-5	Typical 24-Hour Capacities per Lane for the JOHRTS Network	19
III-6	Estimated Typical Hourly Capacities per Lane for JOHRTS Network	19
III-7	Average 24-Hour Speeds for the JOHRTS Network	20
III-8	Estimated Typical Freeflow Speeds for the JOHRTS Network	20
III-9	Volume-Delay Equation Parameters	21
IV-1	Temperature Ranges	23
IV-2	Observed Temperature Data for 14 Days	24
IV-3	Estimated Time-of-Day Average Temperatures for Conformity Analyses	25
IV-4	MOBILE5a Temperature Inputs Used for JOHRTS Conformity Applications	25
V-1	Hardin County Number of Vehicles by Vehicle Type and Number of Vehicles Subject to Multiple Diurnals 1996, 1999, 2006, 2016	29
V-2	Jefferson County Number of Vehicles by Vehicle Type and Number of Vehicles Subject to Multiple Diurnals 1996, 1999, 2006, 2016	30
V-3	Orange County Number of Vehicles by Vehicle Type and Number of Vehicles Subject to Multiple Diurnals 1996, 1999, 2006, 2016	31
V-4	JOHRTS FY-94 TIP and 2016 MTP Conformity Analysis Trip Generation Statistical Data	36
V-5	Jefferson, Orange, and a portion of Hardin County FY-94 TIP and 2016 MTP Conformity Analysis, Network-Based Emission Data	37
V-6	Jefferson and Orange Counties FY-94 TIP and 2016 MTP Conformity Analysis, Network-Based Emission Data	38

SUMMARY

For these conformity analyses, a series of 24-hour assignments was performed for Jefferson and Orange Counties and a portion of Hardin County for the Build and No-Build Options for 1995 (winter 1996), 1996, 1998 (winter 1999), 1999, 2005, and 2015. Summer and/or winter mobile source emission estimates were developed for each of these assignments. A series of programs (POLFAC5A, PREPIN, and IMPSUM) developed by TTI to facilitate the application of the Environmental Protection Agency's (EPA) MOBILE5a program was used for these conformity analyses. The following briefly describes the methodology and software used in developing the estimates.

The four programs used for computing the mobile source emissions for the JOHRTS analyses are:

PREPIN The PREPIN program was developed for use in urban areas (such as El Paso) which do not have time-of-day assignments and speeds available for air quality analyses. The program reads (inputs) the nondirectional 24-hour assignment data set. The 24-hour nondirectional assignment volumes on each link are initially scaled to the appropriate VMT (discussed below). The time-of-day factors are applied to the adjusted 24-hour assignment results on each link to estimate the directional time-of-day travel on the link. Speed models, originally developed for the Dallas-Fort Worth region, are used to estimate the operational time-of-day speeds by direction on the links. Special intrazonal links are defined, and the VMT and speeds for intrazonal trips are estimated. These VMT and speeds by link are subsequently input to the IMPSUM program for the application of MOBILE5a emission factors.

Using the PREPIN software, the JOHRTS 24-hour assignments were used to develop seasonally adjusted time-of-day VMT and speed estimates for four time-of-day periods:

Morning Peak Hour:	7:15 a.m. - 8:15 a.m.
Midday:	8:15 a.m. - 4:45 p.m.
Afternoon Peak Hour:	4:45 p.m. - 5:45 p.m.
Overnight:	5:45 p.m. - 7:15 a.m.

Separate time-of-day VMT and speed estimates were developed for the summer season and the winter season.

VMT VMT estimates for 1990 (summer and winter) were developed from HPMS data by applying a seasonal adjustment factor calculated from automatic traffic recorder (ATR) stations located in Jefferson, Orange, and Hardin Counties. The 1995, 1996, 1998, and 1999 VMT estimates were developed by applying the travel model growth rates to the 1990 seasonally adjusted HPMS-based VMT estimates. The 2005 and 2015 VMT estimates were developed by fitting a least squares regression line through the 1990-1999 VMT estimates. Separate regression lines were fitted to the summer and winter 1990-1996 VMT estimates. The resulting

summer and winter VMT estimates by year were used together with the VMT estimates produced by the various traffic assignments to develop VMT scale factors for use with the PREPIN software. The purpose of the scale factor is to scale the traffic assignment VMT to the appropriate HPMS-based VMT projections. A scaling factor was calculated for each build alternative by comparing the appropriate build alternative traffic assignment VMT to the seasonally adjusted HPMS-based projected VMT for the same year. This scaling factor was kept constant and applied to the analysis of the associated no-build traffic assignment using the PREPIN software.

POLFAC5A The POLFAC5A program is used to apply the EPA's MOBILE5a program to obtain the emission FACTORS (rates). The MOBILE5A emission factors are obtained for eight vehicle types and 63 speeds (i.e., 3 mph through 65 mph) for each vehicle type. There are 504 factors (i.e., $8 \times 63 = 504$) for each pollution type. Three pollution types are computed: VOC, CO, and NOx. Hence, for a given county there are 1,512 emission factors. Because emission factors vary by year, emission factors were developed for each of the target years (i.e., 1995, 1996, 1998, 1999, 2005, and 2015). These emission factors are output to an ASCII file for subsequent input to the IMPSUM program. The POLFAC5A program is applied for each time-of-day time period being modeled. These time-of-day emission factors are applied using the IMPSUM program to time-of-day VMT estimates by link.

The POLFAC5A program was applied to develop the seasonal emission factors for each time-of-day period for each of the application years. The average temperature for the subject season and subject time-of-day period was an input to the POLFAC5A application of the MOBILE5a model. A separate 24-hour application of MOBILE5a was used to develop the diurnal emission rates for the summer season.

IMPSUM The IMPSUM program applies the emission rates (obtained from POLFAC5A) and VMT mixes to the time-of-day VMT and speed estimates to estimate the emissions. The four primary inputs to IMPSUM are:

1. MOBILE5a emission factors developed using POLFAC5A.
2. Abbreviated assignment results by link input for the subject time period developed using the PREPIN program. The PREPIN program allows the user to estimate the VMT and speed on each link by time period. For each link, the following information is input to IMPSUM: county number, roadway type number, VMT on link, operational speed estimate, and link distance.
3. VMT mix by county and roadway type.
4. X-Y coordinates.

Using these input data, the VMT for each link is stratified by the eight vehicle types; and the MOBILE5a emission factors are applied to estimate the mobile source emissions for that link. The emissions for each county and emission type

are reported by both roadway type and vehicle type (i.e., cross-classified by roadway type and vehicle type). A data set is produced for subsequent input to the SUMALL program.

The IMPSUM program was applied to estimate the emissions for each of the four time-of-day periods. The 24-hour diurnal estimates were computed using the 24-hour diurnal rates.

SUMALL The SUMALL program was used to sum the emission estimates for the four time periods and the diurnal emissions to develop the final emission estimates for each assignment. The emissions by emission type are reported for both roadway type and vehicle type (i.e., cross-classified by roadway type and vehicle type).

I. INTRODUCTION

This report documents the mobile source emissions estimation methodology used for the conformity analysis of the FY-94 Transportation Improvement Program for Jefferson Orange Hardin Regional Transportation Study (JOHRTS). This chapter provides a brief overview of the emission estimation methodology and the 24-hour traffic assignments used in the analyses. Chapter II describes the vehicle projections used in the analyses. Chapter III describes the methods used to estimate the seasonally adjusted time-of-day Vehicle Miles of Travel (VMT) and associated operating speeds. Chapter IV discusses the estimation of emission rates using the EPA's MOBILE5a program. Chapter V briefly outlines the method used to develop the emission estimates using the MOBILE5a emission rates and compares the emission estimates for the build and no-build options and with the mobile source emission budget for VOC

OVERVIEW OF EMISSION ESTIMATION METHODOLOGY

For the conformity analyses, a series of 24-hour assignments was performed for the JOHRTS region for the build and no-build options for 1996, 2006, and 2016. Summer mobile source emission estimates were developed for each of these assignments. These conformity analyses did not use TTI's IMPACT program for estimating mobile source emissions. Instead, a new series of programs (i.e., the POLFAC5A, PREPIN and IMPSUM programs developed by TTI) was used for these analyses. The methodology and software used in developing the estimates is described below.

The three programs used for computing the mobile source emissions for the JOHRTS analyses are:

PREPIN	The PREPIN program was developed for urban areas (such as JOHRTS) where time-of-day assignments and speeds are not available for air quality analyses. The program inputs a 24-hour assignment and applies the needed seasonal adjustment factors. The time-of-day factors are applied to the seasonally adjusted 24-hour assignment results to estimate the directional time-of-day travel. The Dallas-Fort Worth speed models are used to estimate the operational time-of-day speeds by direction on the links. Special intrazonal links are defined, and the VMT and speeds for intrazonal trips are estimated. These VMT and speeds by link are subsequently input to the IMPSUM program for the application of MOBILE5a emission factors.
POLFAC5A	The POLFAC5A program is used to apply the EPA's MOBILE5a program to obtain the emission FACTORS (rates). The MOBILE5a emission factors are obtained for eight vehicle types and 63 speeds (i.e., 3 mph through 65 mph) for each vehicle type. Hence, there are 504 factors (i.e., $8 \times 63 = 504$) for each pollution type for each county. Three pollution types are computed: VOC, CO and NOx. Hence, for a given county there are 1,512 emission factors. These emission factors are output to an ASCII

file for subsequent input to the IMPSUM program. The POLFAC5A program is applied for each time-of-day time period being used. These time-of-day emission factors are applied using the IMPSUM program to time-of-day VMT estimates by link.

IMPSUM The IMPSUM program applies the emission rates (obtained from POLFAC5A) and VMT mixes to the time-of-day VMT and speed estimates to estimate the emissions. The basic inputs to IMPSUM are:

1. Data specifying the number of counties in the region and their names.
2. Names of roadway types used in the study. These roadway types are used to summarize the emission results.
3. VMT mix by county.
4. MOBILE5a emission factors developed using POLFAC5A by county.
5. Specification of the units for reporting emissions (grams, pounds, or tons).
6. Abbreviated assignment results by link input for the subject time period. The PREPIN program allows the user to estimate VMT and speed on each link by time period. For each link, the following information is input to IMPSUM: county number, roadway type number, VMT on link, operational speed estimate, and link distance.

Using these input data, the VMT for each link is stratified by the eight vehicle types, and the MOBILE5a emission factors are applied to estimate the mobile source emissions for that link. The emissions for each county and emission type are reported by both roadway type and vehicle type (i.e., cross-classified by roadway type and vehicle type).

Using the PREPIN software, the JOHRTS 24-hour assignments were used to develop seasonally adjusted time-of-day AAWT VMT and speed estimates for four time-of-day periods:

1. Morning Peak Hour:	7:15 a.m. - 8:15 a.m.
2. Midday:	8:15 a.m. - 4:45 p.m.
3. Afternoon Peak Hour:	4:45 p.m. - 5:45 p.m.
4. Overnight:	5:45 p.m. - 7:15 a.m.

Separate time-of-day AAWT VMT and speed estimates were developed for the summer season.

The POLFAC5A program was applied to develop the seasonal emission factors for each

time-of-day period for all application years. The average temperature for the subject season and subject time-of-day period were an input to the POLFAC5A application of the MOBILE5a model. A separate 24-hour application of MOBILE5a was used to develop the diurnal emission rates.

Finally, the IMPSUM program was applied to estimate the emissions for each of the four time-of-day periods. The 24-hour diurnal estimates were computed using the 24-hour diurnal rates. The emission estimates for each of the four time-of-day periods and the diurnal estimates were summed to develop the final emission estimates.

24-HOUR TRAFFIC ASSIGNMENTS

The 24-hour capacity restrained traffic assignments were developed by the TxDOT Transportation Planning and Programming Division in a cooperative effort with the Beaumont District Office of TxDOT and the Beaumont-Port Arthur Metropolitan Planning Organization. Table I-1 summarizes the 24-hour highway assignments used in these analyses.

Table I-1
24-Hour Traffic Assignments

Traffic Assignment	Trip Table Year	Network Year
1996 No-Build Option	1996	1993
1999 Build Option	1999	1999
1999 No-Build Option	1999	1993
2006 Build Option	2006	2005
2006 No-Build Option	2006	1993
2016 Build Option	2016	2016
2016 No-Build Option	2016	1993

These analyses used five highway networks (i.e., the 1993, 1996, 1999, 2005, and 2016 networks). Nine traffic assignments were performed on these five highway networks. The 1993 network was used to represent the no-build option for the conformity analyses.

TRANSPORTATION PROJECTS

The 1993 network represents the current transportation system. The 1996, 1999, and 2016 networks represent the transportation systems that are planned to be operational in those years.

II. PROJECTION OF VEHICLE REGISTRATIONS

The projection of vehicle registrations for use in EPA's MOBILE model program was done using a modified version of the methodology discussed in EPA's "Procedures for Preparing Emissions Projections" (pp. 32-39). The methodology suggested by EPA uses average growth rates for projecting estimates of new vehicle registrations and survival rates for estimating the number of older vehicles that will be registered in future years. The methodology used in this report is similar in that estimates of the number of older vehicles registered in future years is based on the use of scrappage rates which are also the basis for estimating survival rates. The primary difference in the methodology used in this report and that suggested by EPA is that the method suggested by EPA estimates the number of new vehicle registrations for future years. The input data and the methodology are discussed in the following sections.

INPUT DATA

The input data consisted of the number of registered vehicles by age and type of vehicle (i.e., model year), survival or scrappage rates by age and type of vehicle, and population estimates for each county for 1990 through 2020. The registration data for each county came from the TxDOT Motor Vehicle Registration Division. This historical information was used to develop estimates of new vehicle registrations (by county) and estimates of the percentage of registered vehicles by type of vehicle and model year.

The data used in this analysis were the 1989 through 1992 vehicle registrations by model year for each of the counties being analyzed. The registration data for each of these years were data as of September 1 for each year. The 1992 registered vehicles were used as the base year from which subsequent projections were made.

Local data on survival/scrappage rates were not available. Data from "Study of Vehicle Scrappage Rates," Oak Ridge National Laboratory, August 1990, were used for automobiles, light duty trucks, and heavy duty trucks. Scrappage rates were estimated for motorcycles using data from the "1991 Motorcycle Statistical Annual," Motorcycle Industry Council, Inc.

METHODOLOGY

The first step was to estimate the total new vehicle registrations in 1992 for each county since the registration data available for 1992 were data as of September 1, 1992. An estimate of the average growth rate in new vehicle registrations between the years 1986 through 1991 was first developed. Since registration data were available for vehicles by type and model year only for 1989 through 1992, new vehicle registrations for 1986, 1987, and 1988 were estimated using scrappage rates applied to the vehicle registration data for 1989. For example, in Harris County there were 138,384 1988 model automobiles registered in 1989. Using the scrappage rate of 0.00441 for one-year-old vehicles, the number of 1988 automobiles registered in 1988 was estimated by dividing 138,384 by $1 - 0.00441$. The result was an estimate of 138,997 1988 automobiles registered in 1988. Using the same method with scrappage rates for two- and three-year-old vehicles, estimates of new vehicle registrations were developed for 1987 and 1986.

These estimates were then used to develop average growth rates in new vehicle registrations for the five years prior to 1992. The average growth rate was then used to estimate the number of 1992 vehicles registered in 1992.

Based on the number of new vehicles registered as of September 1 each year and the number which were registered at the end of each year (from the next year's registration data), the percentage of new vehicles registered as of September 1 was computed for 1989, 1990, and 1991. A second estimate of the number of 1992 vehicles that would be registered in 1992 was developed based on the average percentage of new vehicles registered as of September 1 applied to the number of 1992 vehicles registered as of September 1, 1992. The final estimate used for 1992 was the average of the two estimates. In estimating vehicle registrations, each type of vehicle was estimated individually.

The Comptroller of Public Accounts supplied vehicle registration data and population estimates for 1990, 1991, and 1992. Regression analyses were performed relating the total number of registered vehicles in a county and the percentage of vehicles by type of vehicle to the population in the county. Total registered vehicles was related directly to population, while the percentage of vehicles in each class was related to the natural log of the population. Where 1989 data were available for registered vehicles, the 1989 population was estimated based on the 1990 through 1992 population estimates.

The 1989 through 1992 vehicle registration data were analyzed to develop estimates of the percentage change in vehicles between years which could be attributed to new vehicle registrations and the percentage which could be attributed to additions/deletions of older vehicles in the vehicle population. A regression analysis was performed on the percentage which could be attributed to new vehicles as a function of population change for each county. The resulting coefficients were applied to the projected population change in each county to estimate the percentage of vehicular growth (by type of vehicle) expected to be due to new vehicle registrations. In addition, a regression analysis was performed relating the growth in new vehicle registrations with the population change from 1989 through 1992.

Beginning with the vehicles registered in 1992 by model year, the scrappage rates were applied to estimate the number of vehicles expected to be in operation (and, therefore, registered) in 1993. Specific rates were used for automobiles, motorcycles, light duty trucks, and heavy duty trucks. The result gave estimates of the number of 1968 through 1992 model year vehicles expected to be registered in each county in 1993.

Using the estimated population for each county and the coefficients obtained from the linear regressions, an estimate of the total vehicles expected to be registered in each county was developed. The percentage of vehicles by type was then estimated using the coefficients obtained from the linear regressions. These estimates were used to develop control totals of the estimated number of registered vehicles for each county. The absolute change in the total number of vehicles (by type) expected to be registered in each county was then estimated by summing the number of 1968 through 1992 vehicles determined to still be in operation in 1993 and subtracting the total from the estimated number of vehicles expected to be registered in the county in 1993 (based on the estimated total registered vehicles by type). The result provided estimates of the number of new and older vehicles which would be registered in the county. The percentage of

those vehicles which would be new vehicles was estimated using the regression coefficients computed earlier and applied to the projected population change from the prior year. Using the regression results which related the change in new vehicle registrations with the population change, a second estimate of the number of new vehicle registrations was computed. For automobiles (LDV), motorcycles (MC), and light duty gas trucks type one (LDGT1), the larger of the two estimates of new vehicle registrations was used. For light duty gas trucks type two (LDGT2), heavy duty gas trucks (HDGV), and heavy duty diesel trucks (HDDV), the two estimates were averaged. These seemed to produce the most realistic results in analyzing the final projections. The remaining older vehicles were distributed in the same proportion as the vehicles which had survived from the prior year. The final step was the conversion of the vehicles into percentages for input to EPA's MOBILE model.

Estimates for 1993 through 2007 were developed using the same methodology applied to each year in a sequential manner. The estimates were then converted to percentages by model year and placed in computer files for input to EPA's MOBILE model. Attachment E provides the final vehicle registration distribution projections for JOHRTS.

The total vehicle registration by county was projected by vehicle type for 1996, 1999, 2006, and 2016. The 1990 data were already available from TxDOT's Motor Vehicle Registration Division. These projections were calculated by each vehicle model year for the current year and the 19 previous years, with the last year including all of the vehicles in the older category. The older category included all vehicles 21 years and older. The totals of all vehicle model years by vehicle type were determined and put into three tables. The original vehicle registration data from TxDOT was aggregated into six vehicle groups: LDV, MC, LDGT1, LDGT2, HDDV, and HDGV. These six groups were then disaggregated into the eight MOBILE5a vehicle groups using the MOBILE5a default values to separate LDV into LDGV and LDDV, LDT1 into LDGT1 and LDDT, and JOHRTS HDGV and HDDV vehicle registration data to separate HDV into HDGV and HDDV.

The above procedures were applied for 1996, 1999, 2006, and 2016. The LDV and LDT1 gas/diesel fractions obtained from MOBILE5a vary by year. The HDV gas/diesel fractions were changed by year. For purposes of illustration, the classifications for Jefferson County for 1996 are shown below:

LDV	100 passenger cars from TxDOT vehicle classification counts
LDGV	98 LDV (MOBILE5a default)
LDDV	2 LDV (MOBILE5a default)
LDT1	80 panel and pickup trucks from TxDOT vehicle classification counts
LDGT1	97 LDT1 (MOBILE5a default)
LDDT	3 LDT1 (MOBILE5a default)
LDGT2	20 panel and pickup trucks from TxDOT vehicle classification counts
	20 other 2-axle from TxDOT vehicle classification counts
HDV	80 other 2-axle, plus remaining truck classifications
HDGV	76.8 HDV (September 1, 1990 JOHRTS Vehicle Registration data)
HDDV	23.2 HDV (September 1, 1990 JOHRTS Vehicle Registration data)
MC	100 motorcycles and motor scooters from vehicle classification counts

The distribution of panel and pickup trucks between LDT1 and LDGT2 and other 2-axle trucks between LDGT2 and HDV is based on the professional judgment of TxDOT traffic data collection staff. TxDOT vehicle classification count procedures do not distinguish between gas and diesel trucks.

Table II-1 shows the projected total number of vehicles registered by the eight vehicle types by county for 1990, 1996, 1999, 2006, and 2016. Table II-2 shows the projected total number of vehicles registered by the eight vehicle types for 2006, and 2016.

**Table II-1
Vehicle Estimates and Projections for JOHRTS**

VEHICLE TYPE	1996 rev 11/29/94			1999 rev 11/30/94		
	Hardin	Jefferson	Orange	Hardin	Jefferson	Orange
LDGV	18,327	124,063	40,979	18,428	123,799	41,243
LDGT1	12,237	47,054	23,915	12,467	45,890	25,530
LDGT2	1,120	3,584	1,615	1,137	3,417	1,744
HDGV	360	2,262	615	342	2,273	633
LDDV	103	747	243	64	479	149
LDDT	92	345	179	80	279	157
HDDV	119	738	236	116	766	262
MC	334	2,858	772	284	2,991	745

Table II-2
Vehicle Estimates for JOHRTS

VEHICLE TYPE	2006 rev 11/29/94			2016 rev 11/30/94		
	Hardin	Jefferson	Orange	Hardin	Jefferson	Orange
LDGV	18,458	122,260	40,366	18,358	118,461	40,603
LDGT1	12,456	42,150	25,646	11,613	35,657	19,752
LDGT2	1,138	3,070	1,679	1,078	2,491	1,402
HDGV	345	2,319	680	436	2,390	753
LDDV	48	329	109	54	346	119
LDDT	93	306	194	156	465	270
HDDV	115	492	260	141	274	186
MC	250	3,456	751	450	4,493	1,187

III. ESTIMATION OF TIME-OF-DAY VMT AND SPEEDS

The time-of-day VMT and speed estimates for JOHRTS were developed using the PREPIN program. The PREPIN program is one of a series developed by TTI to facilitate the application of EPA's MOBILE5a program in estimating of mobile source emissions. The PREPIN program was developed for use in urban areas (such as JOHRTS) which do not have time-of-day assignments and speeds available for air quality analyses. The program inputs a 24-hour assignment and applies the needed seasonal adjustment factors. The time-of-day factors are applied to the seasonally adjusted 24-hour assignment results to estimate the directional time-of-day travel. The Dallas-Fort Worth speed models are used to estimate the operational time-of-day speeds by direction on the links. Special intrazonal links are defined, and the VMT and speeds for intrazonal trips are estimated. These VMT and speeds by link are subsequently input to the IMPSUM program for the application of MOBILE5a emission factors.

For the conformity analyses, a series of 24-hour assignments was performed for the JOHRTS region for the Build and No-Build options for 1996, 1999, 2006, and 2016. For a given application year and season, four applications of PREPIN are run to estimate the directional VMT and speeds for each of four time periods comprising the 24-hour period:

Morning Peak Hour:	7:15 a.m. - 8:15 a.m.
Midday:	8:15 a.m. - 4:45 p.m.
Afternoon Peak Hour:	4:45 p.m. - 5:45 p.m.
Overnight:	5:45 p.m. - 7:15 a.m.

For a given application of the PREPIN program for the JOHRTS conformity analyses, the following parameters and data were input to PREPIN:

- County table of equals
- Area type table of equals
- Seasonal adjustment factor
- Time-of-day factor
- Directional split estimates
- Time-of-day capacity factors
- Freeflow speed factors
- Coefficients for the Dallas-Fort Worth speed estimation model
- Assignment trip table
- Zonal radii data
- Capacity restrained assignment results

The remainder of this chapter discusses these key input data used in the JOHRTS PREPIN applications to prepare the time-of-day VMT and speed estimates. The primary output of PREPIN is a data set for the subject time period containing two records for each link (i.e., one record specifying the estimated time-of-day VMT and speed in the peak, or principal, direction and the second record specifying the estimated VMT and speed in the opposite direction). This data set is subsequently input to the IMPSUM program which applies the MOBILE5a emission rates (developed using the POLFAC5A program) to estimate the mobile source emissions for each

link. Finally, the SUMALL program combines the time-of-day emission estimates and computes the 24-hour diurnal estimates to obtain the 24-hour emission estimates.

COUNTY SPECIFICATIONS

The PREPIN program provides for processing an assignment comprised of up to eight counties. Various summaries are produced by county and for the entire region. For a given application, the counties are numbered sequentially starting with one. The county table of equals data input to PREPIN specifies the zone numbers contained in each county. In the case of JOHRTS, the region is comprised of two counties (Jefferson and Orange) and a portion of a third (Hardin). The zone-to-county table of equals was provided by TxDOT for the conformity applications.

Each link in the network is assigned an associated zone number. Using the link's associated zone number, the county within which the link is located is determined using this input data. The county number is included in the link record output data set produced by PREPIN. The specification of the county number in these data allow the IMPSUM program to accumulate and report the mobile source emission estimates by county.

AREA TYPE SPECIFICATIONS

The PREPIN program allows various factors to be specified by area type number and functional classification number. The JOHRTS regional models use 14 area types for trip generation. The TxDOT Transportation Planning and Programming Division agreed to aggregate these to six area types for the network. The six network area types and their corresponding 14 generation area types are:

Network Area Types	Corresponding Trip Generation Area Types
1. Central Business District (CBD)	1. Beaumont CBD
2. CBD Fringe	2. Beaumont CBD Fringe 14. Beaumont Inner-urban
3. Urban	3. Beaumont Urban 8. Urban 12. Port Arthur Urban
4. Suburban	4. Beaumont Suburban 9. Suburban 13. Port Arthur Suburban
5. Suburban Fringe	5. Beaumont Suburban Fringe 10. Suburban Fringe
6. Rural	6. Beaumont Rural 7. Rural 11. Rural

The JOHRTS network area type table of equals specifies the zones contained in each of the six area types. Using the link's associated zone number, the area type within which the link is located is determined.

SEASONAL ADJUSTMENT FACTORS

Because 24-hour travel on the highway system varies somewhat by season, the PREPIN program provides for the input and application of seasonal adjustment factors to account for the seasonal variations. The seasonal adjustment factors are applied to the 24-hour link volumes to estimate the seasonally adjusted 24-hour volumes and VMT. The following seasonal adjustment factors (estimated using data from the 1990 Annual Report Permanent Automatic Traffic Recorders, TxDOT) were used in the JOHRTS conformity analyses:

<u>County</u>	<u>Summer Factor</u>
Jefferson	1.065
Orange	1.065
Hardin	1.084

The following describes the procedures used to estimate the seasonal adjustment factors:

Summer Seasonal Adjustment Factor Computations

The travel models are assumed to simulate AWT for a typical school year (September through May) and weekday (Monday through Thursday). For purposes of estimating a typical ozone season (June through August) weekday (Monday through Friday) AWT, the Monday through Thursday AWT from the travel model was adjusted in two steps. The first step was to adjust Monday through Thursday travel to represent Monday through Friday travel and the ratio of Monday through Thursday AAWT to Monday through Friday AAWT for the September through May time period. The second step was to adjust the September through May, Monday through Friday AAWT to June through August, Monday through Friday AAWT. The two adjustment factors were then multiplied to provide the total adjustment factor. Data from the ATR stations were used to calculate the adjustment factors.

There are two permanently located automatic traffic recorders (ATRs) in Jefferson County, both on IH-10 in the Beaumont urban area. One ATR is located in the rural area of Hardin County.

The locations and adjustment factors are:

S086 FM-92, 7.0 miles north of US-96, Silsbee
Monday - Thursday to Monday - Friday: 1.035
September - May to June - August: 1.029
Total adjustment: 1.065

S117 IH-10, East end Neches River Bridge, Beaumont
Monday - Thursday to Monday - Friday: 1.032
September - May to June - August: 1.050
Total adjustment: 1.084

S205 IH-10, South of Calder Street overpass, Beaumont

(S205 was out of service in 1990, 1991 and 1992 due to construction.)

The adjustment from ATR S086 was applied to Hardin County, and the adjustment for ATR S117 was applied to both Jefferson and Orange Counties.

TIME-OF-DAY TRAVEL FACTORS

The 1990 household travel survey data for three study areas (San Antonio, Amarillo, and Brownsville) were processed to develop the estimated portions of travel by time of day. Table III-1 summarizes the results obtained from the three studies and the averages used in the conformity analyses. These average percentages are applied to the seasonally adjusted volumes and VMT to estimate the volumes and VMT for each of the four time periods.

Table III-1
Portions of Travel by Time Periods
(in percentages)

	SAN ANTONIO	AMARILLO	BROWNSVILLE	AVERAGE
7:15 am to 8:15 am	10.88	10.84	10.34	10.69
8:15 am to 4:45 pm	48.13	51.17	51.71	50.33
4:45 pm to 5:45 pm	10.34	10.78	9.41	10.18
5:45 pm to 7:15 am	30.66	27.21	28.54	28.80
TOTALS	100.0	100.0	100.0	100.0
Number of Vehicle Trips in the Sample	15,466	20,844	9,567	-

TIME-OF-DAY DIRECTIONAL SPLIT ESTIMATES

The 24-hour link assignment volumes are non-directional volumes (i.e., the sum of the volumes in the two directions on a link). The seasonal adjustment factor and time-of-day travel factor are applied to estimate the seasonally adjusted time-of-day volume on a link. The PREPIN program provides for the application of directional splits to estimate the portion of the travel expected to occur in each direction. These directional volume estimates are used to estimate the directional speeds. The PREPIN program outputs two link records for a link: (1) a link record containing the estimated VMT and (2) speed in the peak (or dominant direction and a link record containing the estimated VMT and speed in the off-peak (or opposite) direction. This allows the IMPSUM program to apply the MOBILE5a emission factors directionally by speed.

Time-of-day directional splits area type and facility type were provided by TxDOT's Transportation Planning and Programming Division after collaboration with TxDOT Beaumont District Office and the Beaumont-Port Arthur Metropolitan Planning Office. Table III-2 summarizes the morning peak directional split used in the JOHRTS PREPIN applications. Table III-3 summarizes the directional splits used for the off-peak periods and Table III-4 summarizes the directional splits used for the afternoon peak period.

Table III-2
Morning Peak-Period Directional Split Estimates for JOHRTS

AREA TYPES	FUNCTIONAL CLASSIFICATIONS									
	0	1	2	3	4	5	6	7	8	9
	Cent. Conn.	IH 10 & Freeway	Multi- lane Highway	Principal Arterial Divided	Principal Arterial Undivided	Minor Arterial Divided	Minor Arterial Undivided	Collectors	Frontage Road	Ramps
1 CBD	54.0	50.0	65.0	65.0	65.0	58.0	58.0	64.5	50.0	50.0
2 CBD Fringe	87.0	50.0	60.0	60.0	60.0	59.0	59.0	63.0	50.0	50.0
3 Urban	85.0	60.0	62.0	62.0	62.0	58.0	58.0	53.0	60.0	60.0
4 Suburban	72.0	61.0	65.0	65.0	65.0	64.0	64.0	64.5	61.0	61.0
5 Suburban Fringe	80.0	65.0	68.0	68.0	68.0	66.0	66.0	62.5	67.0	67.0
6 Rural	78.0	70.0	71.0	71.0	71.0	68.0	68.0	75.0	70.0	70.0

Table III-3
Off-Peak Directional Split Estimates for JOHRTS

AREA TYPES	FUNCTIONAL CLASSIFICATIONS									
	0	1	2	3	4	5	6	7	8	9
	Cent. Conn.	IH 10 & Freeway	Multi-lane Highway	Principal Arterial Divided	Principal Arterial Undivided	Minor Arterial Divided	Minor Arterial Undivided	Collectors	Frontage Road	Ramps
1 CBD	54.0	51.0	55.0	55.0	55.0	55.0	55.0	54.5	51.0	51.0
2 CBD Fringe	54.0	51.0	54.0	54.0	54.0	55.0	55.0	53.0	51.0	51.0
3 Urban	55.0	53.0	50.0	50.0	50.0	52.0	52.0	52.0	53.0	53.0
4 Suburban	55.0	51.0	57.0	57.0	57.0	56.0	56.0	57.0	51.0	51.0
5 Suburban Fringe	53.0	51.0	56.0	56.0	56.0	57.0	57.0	54.0	51.0	51.0
6 Rural	52.0	53.0	55.0	55.0	55.0	58.0	58.0	54.0	53.0	53.0

Table III-4
Afternoon Peak-Period Directional Split Estimates for JOHRTS

AREA TYPES	FUNCTIONAL CLASSIFICATIONS									
	0	1	2	3	4	5	6	7	8	9
	Cent. Conn.	IH 10 & Freeway	Multi-lane Highway	Principal Arterial Divided	Principal Arterial Undivided	Minor Arterial Divided	Minor Arterial Undivided	Collectors	Frontage Road	Ramps
1 CBD	55.0	54.0	62.0	62.0	62.0	52.0	52.0	57.5	54.0	54.0
2 CBD Fringe	72.0	54.0	59.0	59.0	59.0	53.0	53.0	64.5	54.0	54.0
3 Urban	72.0	56.0	57.0	57.0	57.0	54.0	54.0	68.0	56.0	56.0
4 Suburban	72.0	67.0	60.0	60.0	60.0	65.0	65.0	62.5	67.0	67.0
5 Suburban Fringe	71.0	66.0	63.0	63.0	63.0	64.0	64.0	67.0	66.0	66.0
6 Rural	71.0	65.0	66.0	66.0	66.0	63.0	63.0	70.0	65.0	65.0

TIME-OF-DAY CAPACITY FACTORS

The 24-hour capacity restraint assignments are performed using nondirectional 24-hour capacities. The nondirectional capacities are included in the assignment data set which are input to PREPIN. User-supplied time-of-day capacity factors are applied to the non-directional capacity (or service volume) for the subject time period. In computing the directional V/C ratio for estimating the directional speeds, PREPIN assumes the directional split for capacity to be 50-50.

Table III-5 summarizes the typical 24-hour capacities per lane used in the JOHRTS highway networks. Table III-6 summarizes the estimated hourly capacities per lane used in developing the capacity factors. These capacities were developed to be consistent with the hourly capacities used in the Dallas-Fort Worth region for the application of their speed models. The capacity factors for a given time period are computed as follows:

$$\text{Capacity Factor} = \frac{(\text{Hourly Capacity per Lane})(\text{Length of the Time Period})}{24\text{-hour Capacity per Lane}}$$

The length of the time period is specified in hours. Capacity factors (stratified by area type and functional classification) were computed for each of the four time periods.

FREEFLOW SPEED FACTORS

The application of the Dallas-Fort Worth speed models requires an estimate of the freeflow speed on the link. These freeflow speed estimates are computed using the 24-hour speeds input on the link data. The freeflow speed factors (stratified by area type and functional classification) are applied to the 24-hour nondirectional link speeds to estimate the freeflow speed. The freeflow speed is assumed to be the same in each direction.

Table III-7 summarizes the typical 24-hour speeds used in the 1990 JOHRTS highway network. Table III-8 summarizes the typical freeflow speed estimates used in estimating the freeflow speed factors. These freeflow speed estimates were developed to be consistent with those used in the 1990 JOHRTS emissions inventories. The freeflow speed factor for a given functional classification and area type is computed by simply dividing the freeflow speed by the 24-hour speed. These user-estimated factors are input to the PREPIN program using SPDFAC records.

Table III-5
Typical 24-Hour Capacities per Lane for the JOHRTS Network

AREA TYPES	FUNCTIONAL CLASSIFICATIONS									
	0	1	2	3	4	5	6	7	8	9
	Cent. Conn.	IH 10 & Freeway	Multi-lane Highway	Principal Arterial Divided	Principal Arterial Undivided	Minor Arterial Divided	Minor Arterial Undivided	Collectors	Frontage Road	Ramps
1 CBD	-	19,893.58	17,033.33	8,538.40	6,450.00	3,600.00	5,150.97	4,704.58	8,538.40	6,300.00
2 CBD Fringe	-	19,893.58	17,033.33	7,966.38	5,800.00	6,229.17	4,728.09	4,049.87	7,966.38	6,300.00
3 Urban	-	15,762.01	15,854.44	7,516.84	5,504.44	5,490.65	4,440.21	3,923.80	8,541.48	6,300.00
4 Suburban	-	17,636.57	4,250.00	7,105.01	5,484.15	4,329.89	3,385.55	2,833.07	6,235.72	5,700.00
5 Suburban Fringe	-	12,850.00	4,100.00	6,690.3	4,950.00	3,868.26	2,923.92	2,050.00	5,050.76	5,100.00
6 Rural	-	11,412.88	3,482.00	5,943.28	4,173.26	3,395.49	2,451.15	1,840.65	4,598.58	4,500.00

Table III-6
Estimated Typical Hourly Capacities per Lane for JOHRTS Network

AREA TYPES	FUNCTIONAL CLASSIFICATIONS									
	0	1	2	3	4	5	6	7	8	9
	Cent. Conn.	IH 10 & Freeway	Multi-lane Highway	Principal Arterial Divided	Principal Arterial Undivided	Minor Arterial Divided	Minor Arterial Undivided	Collectors	Frontage Road	Ramps
1 CBD	-	1,800.00	550.00	550.00	500.00	550.0	500.00	425.0	550.0	1,100.0
2 CBD Fringe	-	1,850.00	600.00	600.00	550.00	600.0	550.00	450.0	600.0	1,200.0
3 Urban	-	1,875.00	650.00	650.00	600.00	625.0	575.00	475.0	625.0	1,250.0
4 Suburban	-	1,950.00	725.00	725.00	675.00	700.0	625.00	525.0	700.0	1,400.0
5 Suburban Fringe	-	1,950.00	725.00	725.00	675.00	700.0	625.00	525.0	700.0	1,400.0
6 Rural	-	2,000.00	800.00	800.00	725.00	750.0	675.00	550.0	750.0	1,500.0

Table III-7
Average 24-Hour Speeds for the JOHRTS Network

AREA TYPES	FUNCTIONAL CLASSIFICATIONS									
	0	1	2	3	4	5	6	7	8	9
	Cent. Conn.	IH 10 & Freeway	Multi-lane Highway	Principal Arterial Divided	Principal Arterial Undivided	Minor Arterial Divided	Minor Arterial Undivided	Collectors	Frontage Road	Ramps
1 CBD	10.0	38.0	37.0	19.5	15.0	14.0	14.0	14.0	33.0	34.0
2 CBD Fringe	13.3	38.0	37.3	23.2	23.0	21.5	21.5	18.9	33.0	34.0
3 Urban	15.1	39.4	38.0	24.8	23.5	24.2	22.2	21.3	33.4	34.6
4 Suburban	20.1	43.8	45.9	29.5	28.6	29.0	24.4	23.0	36.5	37.3
5 Suburban Fringe	24.2	53.5	54.2	34.5	30.5	29.7	29.7	26.8	41.1	41.6
6 Rural	29.0	55.4	54.6	37.4	33.3	32.6	32.6	30.1	44.4	46.3

Table III-8
Estimated Typical Freeflow Speeds for the JOHRTS Network

AREA TYPES	FUNCTIONAL CLASSIFICATIONS									
	0	1	2	3	4	5	6	7	8	9
	Cent. Conn.	IH 10 & Freeway	Multi-lane Highway	Principal Arterial Divided	Principal Arterial Undivided	Minor Arterial Divided	Minor Arterial Undivided	Collectors	Frontage Road	Ramps
1 CBD	10.00	55.00	17.29	17.29	17.29	15.48	15.48	15.38	17.29	36.15
2 CBD Fringe	13.30	55.00	27.67	27.67	27.67	23.12	23.12	22.42	27.67	41.34
3 Urban	15.10	57.00	29.31	29.31	29.31	24.45	24.45	23.38	29.31	43.16
4 Suburban	19.90	57.00	38.10	38.10	38.10	32.35	32.35	29.87	38.10	47.55
5 Suburban Fringe	23.90	57.00	38.10	38.10	38.10	32.35	32.35	29.87	38.10	47.55
6 Rural	29.10	68.00	60.00	60.00	60.00	55.00	55.00	50.00	60.00	64.00

SPEED MODEL PARAMETERS

In the Dallas-Fort Worth speed model implemented in the PREPIN program, the directional delay (in minutes per mile) due to congestion is computed using a volume-delay equation. The following is the general form of the volume-delay equation used in the model:

$$Delay = Min [A e^{B(\frac{V}{C})}, M]$$

Where:

Delay	=	Congestion delay (in minutes/mile)
A & B	=	Volume-Delay Equation Coefficients (input via DELAY records into the PREPIN program)
M	=	Maximum minutes of delay per mile, read from the DELAY cards
V/C	=	Time-of-day directional V/C ratio

Two sets of coefficients and constraints were developed by the NCTCOG for the D-FW model: one for high-capacity facilities and one for low-capacity facilities. High-capacity facilities (usually freeways) are defined as those having a capacity exceeding 3,400 vehicles per hour (one way). The volume-delay equation parameters which were developed by the NCTCOG in late 1992 for use in the D-FW air quality analyses are presented in Table III-9.

Table III-9
Volume-Delay Equation Parameters

Parameters	Parameter Values	
	High-capacity Facilities	Low-capacity Facilities
A	0.015	0.050
B	3.5	3.0
M	5.0	10.0

Because the functional classification codes used in the link data may vary from study area to study area, PREPIN requires that the user specify the desired delay equation parameters by county and functional classification. For the JOHRTS conformity applications, the high-capacity facilities parameter values in Table III-9 were used for functional classifications 1 and

2 (i.e., Interstate Highway 10 and Freeways and Multi-lane Highways). The low-capacity facilities parameter values in Table III-9 were used for all other functional classifications. The speed models are not applied to centroid connectors. Because centroid connectors represent local streets which generally are relatively uncongested, it is assumed the 24-hour speed is representative of both the peak and off-peak speeds on these facilities.

Given the estimated directional delay (in minutes/mile) and the estimated freeflow speed, the directional congested speed is computed as follows:

$$\text{Congested speed} = \frac{60}{\frac{60}{\text{Freeflow speed}} + \text{Delay}}$$

These congested directional speed estimates for each link are included in the link records produced by PREPIN for subsequent input to the IMPSUM program to estimate the mobile emissions for the traffic moving at this estimated speed.

Other Data Inputs

The remaining data inputs to the PREPIN program are:

- The 24-hour Assignment Data Set: This network data set is produced by the Texas Assignment Package which contains the capacity restraint assignment results. The PREPIN program uses this data set to obtain the following information for each link: the link's A-node and B-node numbers, the link's functional classification, link distance, the input link data speed, and the final nondirectional capacity restrained assignment volume.
- The Assignment Trip Table: This is the packed 24-hour assignment trip table data set used to produce the subject assignment. The PREPIN program uses this data set to obtain the 24-hour intrazonal trips for each zone.
- The Zonal Radii Data: These data are the zonal radii estimates used as input to the trip distribution model applications for the JOHRTS area. These zonal radii estimates are used by PREPIN to estimate the average trip length of intrazonal trips.

These data sets were developed by TxDOT for use in the JOHRTS conformity analyses.

IV. ESTIMATION OF EMISSION RATES USING MOBILE5a

The MOBILE5a program was used to compute the mobile source emission rates (or factors) for the JOHRTS Conformity Analyses. The MOBILE5a program was used directly for the computation of 24-hour diurnal emission rates. The MOBILE5a program was applied using the POLFAC5A program to estimate the emission factors by speed for each of the four time-of-day time periods (i.e., AM Peak Hour, Midday, PM Peak Hour, and Overnight).

The POLFAC5A program is one of a series of programs developed by the Texas Transportation Institute to facilitate the computation of mobile source emissions. The POLFAC5A program is used to apply MOBILE5a to obtain emission factors. The emission factors are obtained for eight vehicle types and 63 speeds (i.e., 3 mph through 65 mph) for each vehicle type. Hence, there are 504 factors (i.e., $8 \times 63 = 504$) for each pollution type for each county. Three pollution types are computed: VOC, CO, and NOx. Hence, for each county there are 1,512 emission factors. These emission factors are output to an ASCII file for subsequent input to the IMPSUM program. For JOHRTS, the POLFAC5A program was applied for each of the four time-of-day time periods for a given year and season. The emission factors from POLFAC5A are applied using the IMPSUM program to estimate emissions.

ESTIMATION OF TEMPERATURES BY TIME PERIOD

TNRCC provided the 24-hour temperature ranges for the JOHRTS area as presented in Table IV-1.

Table IV-1
Temperature Ranges

Season	Low	High	Ambient
Summer Ozone	70	93	85.6

TNRCC suggested that the hourly temperature data from Houston Intercontinental Airport for the 14 event days should be used in developing time-of-day time period temperature estimates for the JOHRTS area. These temperature data were also used for the emissions inventories for the Houston-Galveston region. The average temperature for each of the 24-hour periods was computed using these data; the average observed temperatures for each of the four time periods were computed and are summarized in Table IV-2. The high and low temperatures in the observed data (Table IV-2) are different from those specified in Table IV-1. To use these observed data to estimate the average temperatures for the four time periods for the temperature ranges in Table IV-1, the value of P in the following formula was computed for each time period:

Where:

$$T_i = T_{low} + P_i(T_{high} - T_{low})$$

T_i = Temperature for time period i

T_{low} = Low temperature

T_{high} = High temperature

P_i = P factor for time period i

The P factors for each time period are also summarized in Table IV-2.

The estimated temperatures for each time period were computed using the high and low temperatures provided by TNRCC (see Table IV-1); the P factors were developed using the observed data (see Table IV-2). The resulting estimated average temperatures for each of the four time periods are shown in Table IV-3.

Diurnal rates were computed using a separate application of MOBILE5a. Each application of MOBILE5a requires three temperature inputs: the low temperature, the high temperature, and the ambient temperature. To avoid computing diurnals for the four time periods, the same temperature was input for the low, the high, and the ambient temperatures. Table IV-4 lists the temperature inputs for each of the four time periods and the 24-hour diurnal applications for the JOHRTS Region.

Table IV-2
Observed Temperature Data for 14 Days

	Average Observed Temp	P Factor
LOW Observed Avg. Temp	67.7	-
Time Period 1 (AM Peak)	73.6	0.2556
Time Period 2 (Midday)	86.9	0.8281
Time Period 3 (PM Peak)	88.4	0.8909
Time Period 4 (Overnight)	74.1	0.2748
HIGH Observed Avg. Temp.	90.9	-

Table IV-3
Estimated Time-of-Day Average Temperatures for Conformity Analyses

	Estimated Temp	P Factor
LOW Observed Avg. Temp	70.0	-
Time Period 1 (AM Peak)	75.9	0.2556
Time Period 2 (Midday)	89.0	0.8281
Time Period 3 (PM Peak)	90.5	0.8909
Time Period 4 (Overnight)	76.3	0.2748
HIGH Observed Avg. Temp.	93.0	-

Table IV-4
MOBILE5a Temperature Inputs Used for JOHRTS Conformity Applications

	MOBILE5a Temperature Inputs		
	Low	High	Ambient
Time Period 1 (AM Peak)	75.9	75.9	75.9
Time Period 2 (Midday)	89.1	89.1	89.1
Time Period 3 (PM Peak)	90.5	90.5	90.5
Time Period 4 (Overnight)	76.3	76.3	76.3
24-hour Diurnal Application	70.0	93.0	85.6

MOBILE5a SET-UPS

Appendix A provides the MOBILE5a set-ups for Time Period 1 for Hardin County, Jefferson County, and Orange County. These were used to develop the 1996, 1999, 2006, and 2016 summer emission factors for Time Period 1 (i.e., the AM Peak Period) for each of the three counties. The three temperature inputs in each set-up are highlighted in the last two lines of the input data. The temperatures are the only changes made in the set-ups to develop the emission factors for Time Period 2 (Midday), Time Period 3 (PM Peak Period) and Time Period 4 (Overnight). The temperature inputs used for the other three time periods are listed Table IV-4.

Also provided in Appendix A are the MOBILE5a set-ups for each county used to

develop the 1996, 1999, 2006, and 2016 summer 24-hour diurnal emission rates. These sets of rates are input to the SUMALL program for computing the 24-hour diurnals for each county.

EMISSION RATES

The emission rates are presented in Appendix B. The 24-hour diurnal emission rates for a given application (i.e., a given year and season) are stratified only by vehicle type. The emission factors used in computing the emissions produced on individual links in the highway network for a given application are by the four time-of-day time periods, the eight vehicle types and by 63 speeds (i.e., 3 mph through 65 mph).

V. EMISSION ESTIMATES AND CONFORMITY

The emission estimates are computed using the emission rates discussed in the preceding chapter. The time-of-day emission estimates are developed using the time-of-day emission rates (discussed in Chapter IV) and the time-of-day VMT and speed estimates (discussed in Chapter III). The 24-hour emission estimates are prepared by computing the 24-hour diurnal estimates and combining the diurnal estimates with the results from each of the four time-of-day time periods. The following provides a discussion of the method used to estimate the time-of-day emissions and the method used to develop the 24-hour emission estimates. Also included is a discussion of the application of the transportation conformity criteria.

ESTIMATION OF TIME-OF-DAY EMISSIONS

For a given year and season, the mobile source emissions for each of the four time-of-day time periods were computed using the IMPSUM program. IMPSUM uses emission factors obtained from POLFAC5A, the user-estimated VMT mixes, and the VMT/speed estimates to compute the emissions by county. TTI Research Report 1279-2, User's Guide for the Texas Mobile Source Emission Estimation Software: PREPIN, POLFAC5A, COADJ, IMPSUM, and SUMALL, provides a discussion for this series of programs.

The basic inputs for the conformity applications of IMPSUM for JOHRTS were:

1. Data specifying the number of counties in the region and their names.
2. Names of the road types used in the study. These road types are used to summarize the emissions results. The roadway types used in the conformity analyses are the functional classes used in the networks.
3. VMT mix by county used in the MOBILE5a set-ups.
4. Emission factors from POLFAC5A by county.
5. Specification of the units for reporting emissions (grams, pounds, or tons).
6. Link records providing the estimated VMT and speeds. For each link record, the following information must be provided: county number, road type number, VMT estimate, operational speed estimate, and link distance. These data were prepared using the PREPIN program.

The emission rates produced using MOBILE5a are stratified by eight vehicle types. Hence, to apply the emission rates, VMT for a link record are disaggregated by the eight vehicle types applying the user-supplied VMT mixes. The software was designed to allow the user to input the VMT mix data by county and by roadway type within a county. The IMPSUM program uses these data to disaggregate the VMT for each link by the eight vehicle types based on the user-supplied estimate of the VMT mix for that link's county and roadway type.

The emission estimates are computed for each link by multiplying the appropriate emission factors corresponding to the link's roadway type and the link's estimated speed. For noninteger speed estimates, the emission factors are computed by interpolating between the emission factors for the integer speeds on either side of the subject speed. The interpolation is

performed using the reciprocals of the corresponding speeds rather than the speeds themselves. The emission results are accumulated for each county by vehicle type and roadway type.

ESTIMATION OF 24-HOUR EMISSIONS

For JOHRTS applications, the PREPIN, POLFAC5A, and IMPSUM programs were applied to estimate the mobile source emissions for each of the four time-of-day time periods for each scenario. The four time-of-day estimates were combined with the diurnal estimates to obtain the 24-hour emission estimates. The SUMALL utility program was used to compute the 24-hour emission estimates for JOHRTS.

SUMALL is designed to sum the results from two or more IMPSUM applications (i.e., the time-of-day applications). SUMALL also provides the option of calculating the 24-hour diurnal emission estimates. The diurnal estimates are combined with the time-of-day estimates (which exclude diurnals) to obtain the 24-hour emission estimates. The 24-hour tabular summaries produced by the SUMALL program are essentially the same as those produced for the individual time-of-day time periods by IMPSUM program.

As previously noted, MOBILE5a is not structured to compute diurnal emissions for less than a 24-hour time period; therefore, a separate run of MOBILE5a was made to calculate the diurnal emissions for each application year and season. Diurnal emissions are produced by LDGV, LDGT1, LDGT, HDGV, and MC vehicle types. Diesel vehicle types do not produce diurnal emissions. Multiple diurnal emissions are produced by LDGV, LDGT1, LDGT2, and HDGV. According to Terry Newell, U.S. EPA Motor Vehicle Laboratory, 12.26 percent of LDGV, LDGT1, and LDGT2 vehicle types and 23.1 percent of HDGV vehicles undergo multiple diurnals. These percentages were applied to the total number of vehicles by vehicle type to calculate the number of vehicles of multiple diurnals as shown in Table V-1.

Table V-1
Hardin County Number of Vehicles by Vehicle Type and
Number of Vehicles Subject to Multiple Diurnals 1996, 1999, 2006, 2016

Vehicle Type	Total 1996	Multiple Diurnals 1996	Total 1999	Multiple Diurnals 1999	Total 2006	Multiple Diurnals 2006	Total 2016	Multiple Diurnals 2016
LDGV	18,327	2,247	18,428	2,259	18,458	2,263	18,358	2,251
LDGT1	12,237	1,500	12,467	1,528	12,456	1,427	11,613	1,424
LDGT2	1,120	137	1,137	139	1,138	140	1,078	132
HDGV	360	44	342	42	345	80	436	53
LDDV	103	-	64	-	48	-	54	-
LDDT	92	-	80	-	93	-	156	-
HDDV	119	-	116	-	115	-	141	-
MC	334	-	284	-	250	-	450	-

Note: Diurnal emission rates (grams per gasoline vehicle) are calculated separately for the 24-hour period
 TEMPLG = 1
 HCFLAG = 3
 OUTFMT = 3 (print evaporative emissions rates by component)
 Speed = 19.6

Table V-2
Jefferson County Number of Vehicles by Vehicle Type and
Number of Vehicles Subject to Multiple Diurnals 1996, 1999, 2006, 2016

Vehicle Type	Total 1996	Multiple Diurnals 1996	Total 1999	Multiple Diurnals 1999	Total 2006	Multiple Diurnals 2006	Total 2016	Multiple Diurnals 2016
LDGV	124,063	15,210	123,799	15,178	122,260	14,989	118,461	14,523
LDGT1	47,054	5,769	45,890	5,626	42,150	5,168	35,657	4,372
LDGT2	3,584	439	3,417	419	3,070	376	2,491	305
HDGV	2,262	277	2,273	279	2,319	536	2,390	293
LDDV	747	-	479	-	329	-	346	-
LDDT	345	-	279	-	306	-	465	-
HDDV	738	-	766	-	492	-	274	-
MC	2,858	-	2,991	-	3,456	-	4,493	-

Note: Diurnal emission rates (grams per gasoline vehicle) are calculated separately for the 24-hour period
 TEMFLG = 1
 HCFLAG = 3
 OUTFMT = 3 (print evaporative emissions rates by component)
 Speed = 19.6

Table V-3
Orange County Number of Vehicles by Vehicle Type and
Number of Vehicles Subject to Multiple Diurnals 1996, 1999, 2006, 2016

Vehicle Type	Total 1996	Multiple Diurnals 1996	Total 1999	Multiple Diurnals 1999	Total 2006	Multiple Diurnals 2006	Total 2016	Multiple Diurnals 2016
LDGV	40,979	5,024	41,243	5,056	40,366	4,949	40,603	4,978
LDGT1	23,915	2,932	25,530	3,130	25,646	3,144	19,752	2,422
LDGT2	1,615	198	1,744	214	1,679	206	1,402	172
HDGV	615	75	633	78	680	157	753	92
LDDV	243	-	149	-	109	-	119	-
LDDT	179	-	157	-	194	-	270	-
HDDV	236	-	262	-	260	-	186	-
MC	772	-	745	-	751	-	1,187	-

Note: Diurnal emission rates (grams per gasoline vehicle) are calculated separately for the 24-hour period
 TEMFLG = 1
 HCFLAG = 3
 OUTFMT = 3 (print evaporative emissions rates by component)
 Speed = 19.6

APPLICATION OF THE CONFORMITY CRITERIA

Table V-4 is a summary of data used for input to the trip generation step of the travel demand modeling process. The JOHRTS 2005 demographics, networks, and traffic assignments were used to estimate emissions for 2006. This was done by scaling the 2005 traffic assignment VMT to the seasonal adjusted projected 2006 VMT using the PREPIN software. JOHRTS demographic forecasts were not available for 2006; and, consequently it was not possible to perform the trip generation step for this year.

Emission Inventories and Emission Budgets

The mobile source emissions inventory (MSEI) and the 1996 mobile source emissions budget (MSEB) for JOHRTS was developed by TNRCC. TTI provided to TNRCC 1990 speed estimates cross-classified by HPMS functional classification and travel model area types based on VMT, centerline miles, and lane-miles data obtained from HPMS and the distribution of VMT by functional classification and area type obtained from the travel models. The speed estimates were used by TNRCC to calculate MOBILE5a emission rates. Emissions were calculated for each functional classification and area type cell and summed to get emission totals by county. TNRCC prepared the 1996 projected emissions using the same procedures. TTI provided to TNRCC 1996 projected VMT and speeds cross-classified by functional classification and area type. With the assistance of the Beaumont District, 1996 net additions to the number of centerline miles and lane-miles cross-classified by functional classification and area type were estimated. These estimates provided the basis for the 1996 speed estimates.

When the 1990 MSEI and 1996 MSEB were prepared, the Beaumont/Port Arthur travel models were not sufficiently developed to permit a network-based analysis to be performed. In addition, the travel model included only a portion of Hardin County. The conformity regulations require that a network-based analysis be performed. This has been done to the extent possible. However, since the travel model does not include all of Hardin County, it was necessary to disaggregate the MSEI and the MSEB by county in order to apply the conformity criteria.

The 1990 on-road MSEI is 31.61 tpd of VOC, 282.69 tpd of CO, and 41.09 tpd of NO_x. The 1990 MSEI by county is:

	<u>VOC*</u>	<u>CO*</u>	<u>NO_x*</u>
Hardin	2.81	22.67	2.73
Jefferson	20.64	180.99	26.85
Orange	8.16	79.03	11.51
Total	31.61	282.69	41.09

* tons per day

Reference: 1990 Base Year Ozone Emissions Inventory of Volatile Organic Compound (VOC), Nitrogen Oxides (NO_x and Carbon Monoxide (CO) Emissions for Beaumont/Port Arthur, Texas Nonattainment Area, Final Submittal, TACB, November 1992, page 5-48; and EPA, Thomas Diggs's letter of June 23, 1994. This emissions inventory was prepared using MOBILE5a.

The 1996 Mobile Source Emissions Budget (MSEB) is 19.61 tpd of VOC. There is no CO or NOx budget for 1996. The 1996 MSEB by county is:

	<u>VOC*</u>
Hardin	2.00
Jefferson	13.07
Orange	4.54
Total	19.61
* tons per day	

Reference: Revisions to the State Implementation Plan (SIP) for the Control of Ozone Air Pollution, 1993 Rate-of-Progress SIP for the Dallas/Fort Worth, El Paso, Beaumont/Port Arthur, and Houston/Galveston Ozone Nonattainment Areas, TNRCC, May 13, 1994; and EPA, Thomas Diggs's letter of June 23, 1994.

Adjustments

Two adjustments to the emissions estimates were necessary before application of the conformity criteria. These two adjustments are explained in this section.

An adjustment to the 1996 VOC MSEB was necessary as the budget is for November 15, 1996 and the conformity emissions inventory is for July 1, 1996. The MSEB adjusted to July 1, 1996 is as follows:

	<u>VOC*</u>	<u>Adj.*</u>
Hardin	2.03	+ 0.03
Jefferson	13.45	+ 0.38
Orange	4.68	+ 0.14
Total	20.16	+ 0.55
* tons per day		

Reference: Appendix O, Attachment 2 of the ROP SIP.

No transportation control measures (TCMs) are included in the ROP SIP for Beaumont-Port Arthur and no credit was taken for emissions reductions resulting from the application of TCMs.

By agreement with TNRCC and FHWA staff, the MSEI and MSEB conformity criteria were applied to Jefferson and Orange Counties combined. Differences in the emissions estimates resulting from the application of the two different methodologies (the HPMS spreadsheet method and the link-based network method) are estimated, and an adjustment to the network-based emissions estimates was applied.

The network-based models used to calculate the emissions estimates were developed using a procedure that disaggregates the forecast 24-hour link volumes into four time periods and then further divides the two-way link volumes by direction. Link speeds were then estimated by direction based on the one-way volumes and one-way capacities. Link emissions were estimated by direction by time period and then summed for all time periods. For the JOHRTS network, with about 4,300 links, this is about 34,400 separate emission calculations.

The 1990 MSEI and the 1996 MSEB prepared by TNRCC were developed using procedures that first disaggregated HPMS-based VMT estimates by functional classification, by area type, and by five time periods. Speed estimates were calculated for each cell (functional classification by area type, by time period) and the resulting time-period speeds were then weighted by VMT to estimate an average 24-hour speed for each cell (functional classification by area type). Emissions were then estimated for each cell using the cell speed and the cell VMT. For JOHRTS this was a total of 75 cells or 75 emission calculations. These procedures are referred to as the HPMS spreadsheet procedure.

The link-based model and the HPMS spreadsheet procedure were expected to produce somewhat different results, and the prediction was correct.

TTI developed and applied procedures similar to those used by TNRCC to develop the 1990 MSEI and 1996 MSEB, with one difference, to the 1996 build and no-build networks. Because 1993 and 1996 HPMS lane-miles, centerline miles, and VMT are not available, corresponding estimates were taken from the 1993 and 1996 travel model networks. These networks were disaggregated by facility type, by area type, and by the same five time periods used to develop the 1990 MSEI and 1996 MSEB. The 1996 traffic assignment was disaggregated in the same manner. The disaggregated 1996 traffic (VMT) was then applied to the 1993 disaggregated network capacity (no-build) and 1996 disaggregated network capacity (build) to develop speeds by time period. The speeds by time period were weighted by VMT to estimate an average 24-hour speed for each cell (facility type by area type). Emissions were then calculated for each cell using the cell speed and VMT. The cell emissions were summed to estimate the no-build and build emissions.

The 1996 HPMS spreadsheet procedure produced VOC estimates of 17.63 tpd for the build scenario and 17.73 tpd for the no-build scenario for Jefferson and Orange Counties combined. This compares with the 1996 network-based procedures VOC estimate of 18.10 tpd for the build scenario and 18.16 tpd for the no-build scenario for Jefferson and Orange Counties combined. For 1996 the network-based emissions procedure will produce on average emissions estimates of 0.45 tpd higher than will the HPMS spreadsheet method used to develop the 1996 MSEB. The primary reasons for these differences is that emission rates are not normally distributed about an average speed but, rather, are skewed about an average speed. The link-based travel model procedures, by using disaggregated speeds, will produce higher emissions estimates.

In summary, an adjustment of plus 0.52 tpd is appropriate to change the MSEB from November 15, 1996 to July 1, 1996 for Jefferson and Orange Counties. Or conversely an adjustment of minus 0.52 tpd can be applied to the networkbased emissions estimates to change the estimates from July 1, 1996 to November 15, 1996. An adjustment of minus 0.47 tpd to the

1996 network-based build emissions estimate and minus 0.43 tpd to the 1996 network-based no-build emissions estimate is appropriate to account for the differences in the network-based procedures and the HPMS spreadsheet procedures. If both the adjustments are applied to the 1996 network-based emissions estimates, the total corrections are minus 0.99 tpd of VOC for the build scenario and 0.95 tpd for the no-build scenario for Jefferson and Orange Counties combined. These adjustments were applied and are shown in Table V-6.

Application of Conformity Criteria

Three criteria must be met for a finding of conformity:

1. The VOC and NO_x build emissions must be less than the no-build emissions for all forecast years.
2. The VOC and NO_x build emissions for all forecast years must be less than the 1990 MSEI.
3. The 1996 VOC build emissions must be less than the 1996 VOC MSEB.

The build emissions were compared to the no-build emissions for the entire area covered by the travel model which included all of Jefferson and Orange Counties and a portion of Hardin County. **No projects are included in the TIP or MTP for that portion of Hardin County that is not included in the travel model.** The build versus no-build emissions comparisons are shown in Table V-5. The VOC build emissions are less than the VOC no-build emissions for 1996, 1999, 2006, and 2016. The build/no-build criteria are met for VOC. The NO_x build emissions are not less than the NO_x no-build emissions for 1996, 1999, 2006, and 2016. The build/no-build criteria are not met for NO_x.

In applying the second and third criteria, for the reasons explained above, the emissions for Jefferson and Orange Counties were summed and compared to the MSEI and the MSEB for these two counties. Table V-6 shows the build and no-build emissions for Jefferson and Orange Counties combined. The 1990 VOC MSEI for Jefferson and Orange Counties is 28.80 tpd (20.64 + 8.16). None of the forecast year emissions estimates exceed this value. The 1990 NO_x MSEI for Jefferson and Orange Counties is 38.36 tpd (26.85 + 11.51). None of the forecast year emissions estimates exceed this value. Future year emissions less than the 1990 VOC and NO_x MSEI criterion is met.

The November 15, 1996 VOC MSEB for Jefferson and Orange Counties is 17.61 tpd (13.07 + 4.54). The adjusted network-based 1996 build VOC emissions estimate is 17.11 tpd. The 1996 VOC emissions less than the 1996 MSEB criterion is met.

In summary, the build/no-build criteria are met for VOC but not for NO_x. All forecast year emissions less than the 1990 MSEI criteria are met for VOC and for NO_x. The 1996 VOC emissions less than the 1996 MSEB criterion is met for VOC.

Table V-4
JOHRTS
FY-94 TIP and 2016 MTP Conformity Analysis
Trip Generation Statistical Data

	1990 Base Year	TIP	PLAN		
		1996	1999	2005	2016
Population	351,920	374,024	382,384	400,783	394,036
Dwelling Units	144,823	155,386	159,003	168,590	171,320
Vehicles	254,688	269,297	277,993	296,054	291,587
Vehicles per Capita	0.72	0.72	0.72	0.74	0.74

Source: TxDOT, TP&P

Table V-5
Jefferson, Orange, and a portion of Hardin County
FY-94 TIP and 2016 MTP Conformity Analysis
NETWORK-BASED EMISSION DATA
Ozone Season (Summer)
Four Time Periods

	Total Vehicle Miles of Travel (Including Intrazonals)	Emissions in Tons per Day	Emissions in Tons per Day
		VOC	NOx
90-90-1 Base Year	9,141,443	26.75	40.24
96-93-1 Milestone TIP No-Build	10,605,188	18.76	35.25
96-96-1 Milestone TIP Build	10,569,363	18.70	35.30
99-93-1 Attainment Plan No-Build	10,753,623	16.35	31.65
99-99-1 Attainment Plan Build	10,695,357	16.14	31.58
06-93-1 Mid-Range Plan No-Build	12,544,470	14.15	28.32
06-06-1 Mid-Range Plan Build	12,466,837	13.80	28.38
16-93-1 Plan No-Build	14,875,234	15.93	30.85
16-15-1 Plan Build	14,799,904	15.41	31.18

Sources: 1990 TxDOT Travel Model
Networks and Traffic Assignments, TxDOT
VMT, Emission Factors and Emission Estimates, TTI

Table V-6
Jefferson and Orange Counties
FY-94 TIP and 2016 MTP Conformity Analysis
NETWORK-BASED EMISSION DATA
Ozone Season (Summer)
Four Time Periods

	Total Vehicle Miles of Travel (Including Intrazonals)	Emissions in Tons per Day	Emissions in Tons per Day
		VOC	NOx
1990 TNRCC BYEI	9,018,317	28.80	38.36
96-93-1 Milestone TIP No-Build	10,323,446	18.16 *17.21	34.54
96-96-1 Milestone TIP Build	10,287,584	18.10 *17.11 **17.61	34.59
99-93-1 Attainment Plan No-Build	10,469,697	15.92	31.00
99-99-1 Attainment Plan Build	10,411,441	15.71	30.93
06-93-1 Mid-Range Plan No-Build	12,211,474	13.80	27.72
06-06-1 Mid-Range Plan Build	14,135,252	13.44	27.73
16-93-1 Plan No-Build	14,482,446	15.55	30.17
16-15-1 Plan Build	14,414,584	15.03	30.46

Notes: * Network-based VOC adjusted to November 15, 1996 and with methodology correction applied
 ** TNRCC/EPA VOC MSEB for Jefferson and Orange Counties

Sources: Networks and Traffic Assignments, TxDOT
 VMT, Emission Factors and Emission Estimates, TTI

APPENDIX A: MOBILE5a SET-UPS

Provided in the Appendix are the MOBILE5a set-ups for the conformity analyses. The MOBILE5a set-ups are presented in the following order:

1996 Hardin County
1996 Jefferson County
1996 Orange County

1999 Hardin County
1999 Jefferson County
1999 Orange County

2006 Hardin County
2006 Jefferson County
2006 Orange County

2016 Hardin County
2016 Jefferson County
2016 Orange County

1996 Hardin County MOBILE5a Set-up for Time Period 1

```

1      PROMPT
1 Hardin County Projected Control 1996 INVENTORY  TIER I,          T1
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT
3      MYMRFG - 1996 Projected vehicle registrations
1      NEWFLG - Default BERS
1      IMFLAG - No I/M
1      ALHFLG - No additional correction factors
1      ATPFLG - No ATP
5      RLFLAG - Zero-out refueling emissions
2      LOCFLG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
4      OUTFMT - 80 column descriptive
4      PRTFLG - Print all three pollutants
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print volatile organic compounds (VOC)
1      HCFLAG - Print total HC
.604 .348 .030 .010 .002 .002 .003 .001      VMT mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,L
.061 .081 .082 .082 .081 .076 .074 .073 .063 .051      July,1996 .LDGV..MY AGES 1-1
.048 .047 .040 .026 .022 .019 .015 .016 .014 .010      Vehicle 11-
.005 .003 .002 .002 .006      Registrations 21-
.053 .071 .074 .076 .076 .076 .067 .076 .060 .041      .LDGT1.MY AGES 1-1
.044 .040 .043 .026 .028 .028 .018 .022 .021 .016      11-
.011 .006 .006 .005 .016      21-
.080 .107 .102 .098 .093 .065 .060 .049 .039 .019      .LDGT2.MY AGES 1-1
.040 .035 .045 .021 .029 .013 .014 .016 .017 .016      11-
.011 .007 .005 .005 .012      21-
.035 .046 .047 .048 .049 .043 .040 .045 .035 .016      .HDGV..MY AGES 1-1
.020 .047 .054 .023 .075 .054 .047 .060 .056 .020      11-
.022 .024 .016 .020 .056      21-
.061 .081 .082 .082 .081 .076 .074 .073 .063 .051      .LDDV..MY AGES 1-1
.048 .047 .040 .026 .022 .019 .015 .016 .014 .010      11-
.005 .003 .002 .002 .006      21-
.053 .071 .074 .076 .076 .076 .067 .076 .060 .041      .LDDT..MY AGES 1-1
.044 .040 .043 .026 .028 .028 .018 .022 .021 .016      11-
.011 .006 .006 .005 .016      21-
.024 .032 .035 .037 .035 .036 .026 .026 .017 .008      .HDDV..MY AGES 1-1
.016 .106 .066 .035 .041 .047 .072 .045 .140 .019      11-
.025 .025 .031 .025 .033      21-
.005 .007 .021 .032 .032 .030 .027 .057 .021 .023      .MC....MY AGES 1-1
.038 .707 .000 .000 .000 .000 .000 .000 .000 .000      11-
.000 .000 .000 .000 .000      21-
HARDIN I/M      75.9 75.9 8.0 7.8 92      LAP REC: SCNME,MN
1 96 XXXX 75.9 20.6 27.3 20.6 7      SCN REC1.A

```

1996 Hardin County MOBILE5a Set-up for 24-Hour Diurnals Rates

```

1      PROMPT
1 Hardin County Projected Control 1996 INVENTORY  TIER I, tnrc  T24
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT
3      MYMRFG - 1996 Projected vehicle registrations
1      NEWFLG - Default BERS
1      IMFLAG - No I/M
1      ALHFLG - No additional correction factors
1      ATPFLG - No ATP
5      RLFLAG - Zero-out refueling emissions
2      LOCFLG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
4      OUTFMT - 80 column descriptive
4      PRTFLG - Print all three pollutants
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print volatile organic compounds (VOC)
1      HCFLAG - Print total HC
.604.348.030.010.002.002.003.001      VMT mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,L
.061 .081 .082 .082 .081 .076 .074 .073 .063 .051 July,1996 .LDGV..MY AGES 1-1
.048 .047 .040 .026 .022 .019 .015 .016 .014 .010 Vehicle 11-
.005 .003 .002 .002 .006 Registrations 21-
.053 .071 .074 .076 .076 .076 .067 .076 .060 .041 .LDGT1.MY AGES 1-1
.044 .040 .043 .026 .028 .028 .018 .022 .021 .016 11-
.011 .006 .006 .005 .016 21-
.080 .107 .102 .098 .093 .065 .060 .049 .039 .019 .LDGT2.MY AGES 1-1
.040 .035 .045 .021 .029 .013 .014 .016 .017 .016 11-
.011 .007 .005 .005 .012 21-
.035 .046 .047 .048 .049 .043 .040 .045 .035 .016 .HDGV..MY AGES 1-1
.020 .047 .054 .023 .075 .054 .047 .060 .056 .020 11-
.022 .024 .016 .020 .056 21-
.061 .081 .082 .082 .081 .076 .074 .073 .063 .051 .LDDV..MY AGES 1-1
.048 .047 .040 .026 .022 .019 .015 .016 .014 .010 11-
.005 .003 .002 .002 .006 21-
.053 .071 .074 .076 .076 .076 .067 .076 .060 .041 .LDDT..MY AGES 1-1
.044 .040 .043 .026 .028 .028 .018 .022 .021 .016 11-
.011 .006 .006 .005 .016 21-
.024 .032 .035 .037 .035 .036 .026 .026 .017 .008 .HDDV..MY AGES 1-1
.016 .106 .066 .035 .041 .047 .072 .045 .140 .019 11-
.025 .025 .031 .025 .033 21-
.005 .007 .021 .032 .032 .030 .027 .057 .021 .023 .MC....MY AGES 1-1
.038 .707 .000 .000 .000 .000 .000 .000 .000 .000 11-
.000 .000 .000 .000 .000 21-
HARDIN I/M 70.0 93.0 8.0 7.8 92 LAP REC: SCNME,MN
1 96 19.6 85.6 20.6 27.3 20.6 7 SCN REC1.A

```

1996 Jefferson County MOBILE5a Set-up for Time Period 1

```

1      PROMPT
1 Jefferson County Control Strategy Projection TIER 1, PROJECTED I/M      T1
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT mix
3      MYMRFG - 1996 Projected vehicle registration
1      NEWFLG - Default BER
2      IMFLAG - 1994 I/M
1      ALHFLG - No additional correction factors
5      ATPFLG - ATP & Pressure Test
5      RLFLAG - Zero-out refueling emissions
2      LOCFLG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
4      OUTFMT - 80 Column descriptive
4      PRTFLG - Print all three pollutant emission factors
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print volatile organic compounds (VOC)
1      HCFLAG - Print total HC
.590.240.065.037.002.001.062.003      VMT Mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,HD
.048 .070 .069 .075 .080 .082 .075 .074 .066 .058      July,1996 .LDGV..MY AGES 1-1
.052 .049 .044 .027 .023 .021 .017 .018 .015 .012      TTI Vehicle 11-
.006 .004 .003 .003 .008      Registrations 21-
.066 .084 .081 .078 .074 .074 .061 .065 .052 .042      .LDGT1.MY AGES 1-1
.043 .041 .042 .026 .029 .025 .017 .021 .019 .016      11-
.011 .005 .006 .005 .015      21-
.076 .097 .092 .088 .084 .064 .054 .058 .047 .021      .LDGT2.MY AGES 1-1
.039 .045 .046 .028 .026 .019 .015 .024 .017 .019      11-
.015 .008 .006 .005 .007      21-
.053 .069 .067 .065 .064 .055 .051 .049 .046 .027      .HDGV..MY AGES 1-1
.034 .042 .042 .027 .036 .039 .029 .038 .036 .026      11-
.014 .023 .021 .018 .033      21-
.048 .070 .069 .075 .080 .082 .075 .074 .066 .058      .LDDV..MY AGES 1-1
.052 .049 .044 .027 .023 .021 .017 .018 .015 .012      11-
.006 .004 .003 .003 .008      21-
.066 .084 .081 .078 .074 .074 .061 .065 .052 .042      .LDDT..MY AGES 1-1
.043 .041 .042 .026 .029 .025 .017 .021 .019 .016      11-
.011 .005 .006 .005 .015      21-
.055 .067 .066 .063 .057 .072 .044 .025 .035 .031      .HDDV..MY AGES 1-1
.040 .049 .032 .025 .034 .071 .056 .049 .033 .022      11-
.013 .017 .011 .012 .022      21-
.023 .032 .033 .032 .034 .022 .022 .039 .031 .026      .MC....MY AGES 1-1
.052 .653 .000 .000 .000 .000 .000 .000 .000 .000      11-
.000 .000 .000 .000 .000      21-
95 20 68 20 1. 1. 096 1 2 2222 3211 220. 1.20 999.
95 68 20 2222 12 096. 12211111
95 71 20 2222 12 096.
JEF I/M      75.9 75.9 08.0 07.8 92      LAP REC: SCNME,MNTMP,MXTMP,RVP1,R
1 96 XXXX 75.9 20.6 27.3 20.6 7      SCN REC: RGN,CY,SPD,AMB1.A

```

1996 Jefferson County MOBILE5a Set-up for 24-Hour Diurnals Rates

```

1          PROMPT
1 Jefferson County Control Strategy ProjECTION TIER I, PROJECTED I/M thrcc set
1          TAMFLG - Default: Tampering Rates
1          SPDFLG - User input: one speed for all vehicle types
3          VMFLAG - 1996 Projected VMT mix
3          MYMRFG - 1996 Projected vehicle registration
1          NEWFLG - Default BER
2          IMFLAG - 1994 I/M
1          ALHFLG - No additional correction factors
5          ATPFLG - ATP & Pressure Test
5          RLFLAG - Zero-out refueling emissions
2          LOCFLG - User input: one LAP record for all scenarios
1          TEMFLG - MOBILE5A calculates exhaust temperatures
4          QUTFMT - 80 Column descriptive
4          PRTFLG - Print all three pollutant emission factors
1          IDLFLG - No idle emissions calculated or printed
3          NMHFLG - Print volatile organic compounds (VOC)
1          HCFLAG - Print total HC
.590.240.065.037.002.001.062.003      VMT Mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,HD
.048 .070 .069 .075 .080 .082 .075 .074 .066 .058      July,1996 .LDGV..MY AGES 1-1
.052 .049 .044 .027 .023 .021 .017 .018 .015 .012      TTI Vehicle 11-
.006 .004 .003 .003 .008                      Registrations 21-
.066 .084 .081 .078 .074 .074 .061 .065 .052 .042      .LDGT1.MY AGES 1-1
.043 .041 .042 .026 .029 .025 .017 .021 .019 .016      11-
.011 .005 .006 .005 .015                      21-
.076 .097 .092 .088 .084 .064 .054 .058 .047 .021      .LDGT2.MY AGES 1-1
.039 .045 .046 .028 .026 .019 .015 .024 .017 .019      11-
.015 .008 .006 .005 .007                      21-
.053 .069 .067 .065 .064 .055 .051 .049 .046 .027      .HDGV..MY AGES 1-1
.034 .042 .042 .027 .036 .039 .029 .038 .036 .026      11-
.014 .023 .021 .018 .033                      21-
.048 .070 .069 .075 .080 .082 .075 .074 .066 .058      .LDDV..MY AGES 1-1
.052 .049 .044 .027 .023 .021 .017 .018 .015 .012      11-
.006 .004 .003 .003 .008                      21-
.066 .084 .081 .078 .074 .074 .061 .065 .052 .042      .LDDT..MY AGES 1-1
.043 .041 .042 .026 .029 .025 .017 .021 .019 .016      11-
.011 .005 .006 .005 .015                      21-
.055 .067 .066 .063 .057 .072 .044 .025 .035 .031      .HDDV..MY AGES 1-1
.040 .049 .032 .025 .034 .071 .056 .049 .033 .022      11-
.013 .017 .011 .012 .022                      21-
.023 .032 .033 .032 .034 .022 .022 .039 .031 .026      .MC....MY AGES 1-1
.052 .653 .000 .000 .000 .000 .000 .000 .000 .000      11-
.000 .000 .000 .000 .000                      21-
95 20 68 20 1. 1. 096 1 2 2222 3211 220. 1.20 999.
95 68 20 2222 12 096. 12211111
95 71 20 2222 12 096.
JEF I/M          70.0 93.0 08.0 07.8 92      LAP REC: SCNME,MNTMP,MXTMP,RVP1,R
1 96 19.6 85.6 20.6 27.3 20.6 7      SCN REC: RGN,CY,SPD,AMB1-A

```


1996 Orange County MOBILE5a Set-up for Time Period 1

```

1      PROMPT
1 Orange County Projected Control Strategy TIER I, PROJECTED I/M      T1
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT Mix
3      MYMRFG - 1996 Projected vehicle registrations
1      NEWFLG - Default BERS
2      IMFLAG - 1994 I/M Program
1      ALHFLG - No additional correction factors
5      ATPFLG - ATP & Pressure Test
5      RLFLAG - Zero-out refueling emissions
2      LOCFLG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
4      OUTFMT - 80 column descriptive
4      PRTFLG - Print all three pollutant emission factors
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print volatile organic compounds (VOC)
1      HCFLAG - Print total HC
.590.240.065.037.002.001.062.003      VMT Mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,H
.067 .090 .087 .084 .080 .070 .065 .066 .062 .049      July,1996 .LDGV..MY AGES 1-1
.048 .043 .042 .025 .022 .021 .017 .018 .014 .011      Forecasted      11-
.006 .003 .003 .002 .007      Registrations      21-
.071 .095 .089 .082 .077 .062 .056 .057 .048 .037      .LDGT1..MY AGES 1-1
.040 .040 .037 .025 .030 .027 .018 .025 .023 .016      11-
.012 .006 .006 .005 .017      21-
.084 .112 .104 .096 .089 .055 .042 .057 .034 .018      .LDGT2..MY AGES 1-1
.042 .044 .039 .026 .029 .017 .015 .023 .017 .015      11-
.018 .007 .006 .005 .007      21-
.040 .053 .051 .049 .047 .050 .033 .041 .031 .015      .HDGV..MY AGES 1-1
.042 .049 .055 .026 .033 .049 .047 .044 .048 .038      11-
.032 .035 .028 .014 .049      21-
.067 .090 .087 .084 .080 .070 .065 .066 .062 .049      .LDDV..MY AGES 1-1
.048 .043 .042 .025 .022 .021 .017 .018 .014 .011      11-2
.006 .003 .003 .002 .007      21-
.071 .095 .089 .082 .077 .062 .056 .057 .048 .037      .LDDT..MY AGES 1-1
.040 .040 .037 .025 .030 .027 .018 .025 .023 .016      11-
.012 .006 .006 .005 .017      21-
.034 .046 .041 .037 .035 .027 .057 .013 .017 .016      .HDDV..MY AGES 1-1
.032 .080 .073 .025 .027 .120 .055 .071 .064 .028      11-
.035 .006 .012 .022 .027      21-
.024 .030 .031 .030 .032 .019 .026 .023 .025 .037      .MC....MY AGES 1-1
.057 .666 .000 .000 .000 .000 .000 .000 .000 .000      11-
.000 .000 .000 .000 .000      21-
95 20 68 20 1. 1. 096 1 2 2222 3211 220. 1.20 999.
95 68 20 2222 12 096. 12211111
95 71 20 2222 12 096.
ORANGE I/M      75.9 75.9 08.0 07.8 92      LAP REC: SCNME,MNTMP,MXTMP,RVP1,R
1 96 XXXX 75.9 20.6 27.3 20.6 7      SCN REC: RGN,CY,SPD,AMB1.A

```

1996 Orange County MOBILE5a Set-up for 24-Hour Diurnals Rates

```

1      PROMPT
1 Orange County Projected Control Strategy TIER I, PROJECTED I/M      tnrcc  T24
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT Mix
3      MYMRFG - 1996 Projected vehicle registrations
1      NEWFLG - Default BERS
2      IMFLAG - 1994 I/M Program
1      ALHFLG - No additional correction factors
5      ATPFLG - ATP & Pressure Test
5      RLFLAG - Zero-out refueling emissions
2      LOCFLG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
4      OUTFMT - 80 column descriptive
4      PRFLG - Print all three pollutant emission factors
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print volatile organic compounds (VOC)
1      HCFLAG - Print total HC
.590.240.065.037.002.001.062.003      VMT Mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,H
.067 .090 .087 .084 .080 .070 .065 .066 .062 .049      July,1996 .LDGV..MY AGES 1-1
.048 .043 .042 .025 .022 .021 .017 .018 .014 .011      Forecasted      11-
.006 .003 .003 .002 .007      Registrations      21-
.071 .095 .089 .082 .077 .062 .056 .057 .048 .037      .LDGT1.MY AGES 1-1
.040 .040 .037 .025 .030 .027 .018 .025 .023 .016      11-
.012 .006 .006 .005 .017      21-
.084 .112 .104 .096 .089 .055 .042 .057 .034 .018      .LDGT2.MY AGES 1-1
.042 .044 .039 .026 .029 .017 .015 .023 .017 .015      11-
.018 .007 .006 .005 .007      21-
.040 .053 .051 .049 .047 .050 .033 .041 .031 .015      .HDGV..MY AGES 1-1
.042 .049 .055 .026 .033 .049 .047 .044 .048 .038      11-
.032 .035 .028 .014 .049      21-
.067 .090 .087 .084 .080 .070 .065 .066 .062 .049      .LDDV..MY AGES 1-1
.048 .043 .042 .025 .022 .021 .017 .018 .014 .011      11-2
.006 .003 .003 .002 .007      21-
.071 .095 .089 .082 .077 .062 .056 .057 .048 .037      .LDDT..MY AGES 1-1
.040 .040 .037 .025 .030 .027 .018 .025 .023 .016      11-
.012 .006 .006 .005 .017      21-
.034 .046 .041 .037 .035 .027 .057 .013 .017 .016      .HDDV..MY AGES 1-1
.032 .080 .073 .025 .027 .120 .055 .071 .064 .028      11-
.035 .006 .012 .022 .027      21-
.024 .030 .031 .030 .032 .019 .026 .023 .025 .037      .MC....MY AGES 1-1
.057 .666 .000 .000 .000 .000 .000 .000 .000 .000      11-
.000 .000 .000 .000 .000      21-
95 20 68 20 1. 1. 096 1 2 2222 3211 220. 1.20 999.
95 68 20 2222 12 096. 12211111
95 71 20 2222 12 096.
ORANGE I/M      70.0 93.0 08.0 07.8 92      LAP REC: SCNME,MNTMP,MXTMP,RVP1,R
1 96 19.6 85.6 20.6 27.3 20.6 7      SCN REC: RGN,CY,SPD,AMB1.A

```

1999 Hardin County MOBILE5a Set-up for Time Period 1

```

1      PROMPT
1 Hardin County Projected Control 1999 Inventory  Tier I, Projected I/M      T1
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT
3      MYMRFG - 1999 Projected vehicle registrations
1      NEWFLG - Default BERS
2      IMFLAG - 1994 I/M
1      ALHFLG - No additional correction factors
5      ATPFLG - ATP & Pressure Test
5      RLFLAG - Zero-out refueling emissions
2      LOCFLG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
4      OUTFMT - 80 column descriptive
4      PRTFLG - Print all three pollutants
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print volatile organic compounds (VOC)
1      HCFLAG - Print total HC
.604.348.030.010.002.002.003.001      VMT mix:  LDGV,LDGT1,LDGT2,HDGV,LDDV,L
.060 .080 .079 .079 .078 .077 .075 .072 .065 .060      LDGV 1999
.055 .044 .033 .028 .026 .021 .013 .011 .009 .007      LDGV 1999
.008 .007 .005 .003 .006      LDGV 1999
.047 .064 .064 .065 .065 .067 .068 .067 .065 .055      LDGT1 1999
.062 .047 .031 .033 .030 .031 .019 .020 .020 .013      LDGT1 1999
.016 .015 .011 .008 .019      LDGT1 1999
.073 .094 .090 .086 .085 .081 .076 .071 .049 .044      LDGT2 1999
.035 .027 .013 .026 .023 .028 .013 .018 .008 .009      LDGT2 1999
.010 .011 .010 .007 .016      LDGT2 1999
.034 .047 .047 .049 .048 .048 .048 .049 .043 .038      HDGV 1999
.041 .032 .014 .017 .039 .045 .018 .060 .043 .037      HDGV 1999
.048 .044 .016 .018 .076      HDGV 1999
.060 .080 .079 .079 .078 .077 .075 .072 .065 .060      LDDV 1999
.055 .044 .033 .028 .026 .021 .013 .011 .009 .007      LDDV 1999
.008 .007 .005 .003 .006      LDDV 1999
.047 .064 .064 .065 .065 .067 .068 .067 .065 .055      LDDT 1999
.062 .047 .031 .033 .030 .031 .019 .020 .020 .013      LDDT 1999
.016 .015 .011 .008 .019      LDDT 1999
.024 .033 .034 .036 .036 .038 .040 .037 .037 .027      HDDV 1999
.026 .016 .008 .014 .095 .058 .030 .035 .040 .061      HDDV 1999
.038 .118 .016 .021 .081      HDDV 1999
.005 .008 .009 .010 .009 .025 .036 .030 .028 .024      MC 1999
.056 .761 .000 .000 .000 .000 .000 .000 .000 .000      MC 1999
.000 .000 .000 .000 .000      MC 1999
94 20 68 20 1. 1. 095 1 2 2222 2211 220. 1.20 999.
94 68 20 2222 12 095. 12211111
94 68 20 2222 12 095.
Hardin I/M      75.9 75.9 8.0 7.8 92      LAP rec: SCNME,MN
1 99 xxxx 75.9 20.6 27.3 20.6 7      SCN rec: RGN,CY,

```

1999 Hardin County MOBILE5a Set-up for 24-Hour Diurnals Rates

```

1      PROMPT
1 Hardin County Projected Control 1999 Inventory  Tier I, Projected I/M
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT
3      MYMRFG - 1999 Projected vehicle registrations
1      NEWFLG - Default BERs
2      IMFLAG - 1994 I/M
1      ALHFLG - No additional correction factors
5      ATPFLG - ATP & Pressure Test
5      RLFLAG - Zero-out refueling emissions
2      LOCFLG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
3      OUTFMT - 112-Descriptive format
4      PRTFLG - Print HC, CO, and NOX emission factors
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print HC = Volatile organic compounds (VOC)
3      HCFLAG - HC components
.604.348.030.010.002.002.003.001      VMT mix:
LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,HDDV,MC
.060 .080 .079 .079 .078 .077 .075 .072 .065 .060      LDGV 1999
.055 .044 .033 .028 .026 .021 .013 .011 .009 .007      LDGV 1999
.008 .007 .005 .003 .006      LDGV 1999
.047 .064 .064 .065 .065 .067 .068 .067 .065 .055      LDGT1 1999
.062 .047 .031 .033 .030 .031 .019 .020 .020 .013      LDGT1 1999
.016 .015 .011 .008 .019      LDGT1 1999
.073 .094 .090 .086 .085 .081 .076 .071 .049 .044      LDGT2 1999
.035 .027 .013 .026 .023 .028 .013 .018 .008 .009      LDGT2 1999
.010 .011 .010 .007 .016      LDGT2 1999
.034 .047 .047 .049 .048 .048 .048 .049 .043 .038      HDGV 1999
.041 .032 .014 .017 .039 .045 .018 .060 .043 .037      HDGV 1999
.048 .044 .016 .018 .076      HDGV 1999
.060 .080 .079 .079 .078 .077 .075 .072 .065 .060      LDDV 1999
.055 .044 .033 .028 .026 .021 .013 .011 .009 .007      LDDV 1999
.008 .007 .005 .003 .006      LDDV 1999
.047 .064 .064 .065 .065 .067 .068 .067 .065 .055      LDDT 1999
.062 .047 .031 .033 .030 .031 .019 .020 .020 .013      LDDT 1999
.016 .015 .011 .008 .019      LDDT 1999
.024 .033 .034 .036 .036 .038 .040 .037 .037 .027      HDDV 1999
.026 .016 .008 .014 .095 .058 .030 .035 .040 .061      HDDV 1999
.038 .118 .016 .021 .081      HDDV 1999
.005 .008 .009 .010 .009 .025 .036 .030 .028 .024      MC 1999
.056 .761 .000 .000 .000 .000 .000 .000 .000 .000      MC 1999
.000 .000 .000 .000 .000      MC 1999
94 20 68 20 1. 1. 095 1 2 2222 2211 220. 1.20 999.
94 68 20 2222 12 095. 12211111
94 68 20 2222 12 095.
Hardin I/M      70. 093. 8.0 7.8 92      LAP rec:
1 99 19.6 85.6 20.6 27.3 20.6 7      SCN rec:

```

1999 Jefferson County MOBILE5a Set-up for Time Period 1

```

1      PROMPT
1 Jefferson County 1999 Control Strategy Projection Tier I, Projected I/M    T1
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT mix
3      MYMRFG - 1999 Projected vehicle registration
1      NEWFLG - Default BER
2      IMFLAG - 1994 I/M
1      ALHFLG - No additional correction factors
5      ATPFLG - ATP & Pressure Test
5      RLFLAG - Zero-out refueling emissions
2      LOCFLG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
4      OUTFMT - 80 Column descriptive
4      PRTFLG - Print all three pollutant emission factors
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print volatile organic compounds (VOC)
1      HCFLAG - Print total HC
.590.240.065.037.002.001.062.003      VMT Mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,HD
.048 .063 .063 .067 .072 .070 .075 .077 .076 .065      LDGV 1999
.060 .050 .041 .034 .030 .026 .015 .013 .011 .009      LDGV 1999
.009 .008 .006 .003 .009      LDGV 1999
.061 .079 .079 .075 .072 .069 .065 .061 .059 .048      LDGT1 1999
.050 .039 .030 .030 .028 .028 .017 .020 .017 .011      LDGT1 1999
.014 .012 .011 .007 .017      LDGT1 1999
.069 .087 .087 .083 .079 .075 .070 .066 .049 .041      LDGT2 1999
.042 .033 .014 .026 .030 .030 .018 .017 .012 .010      LDGT2 1999
.015 .011 .012 .010 .014      LDGT2 1999
.052 .068 .067 .066 .064 .062 .059 .057 .048 .044      HDGV 1999
.040 .037 .021 .026 .031 .031 .020 .026 .028 .020      HDGV 1999
.027 .026 .018 .010 .055      HDGV 1999
.048 .063 .063 .067 .072 .070 .075 .077 .076 .065      LDDV 1999
.060 .050 .041 .034 .030 .026 .015 .013 .011 .009      LDDV 1999
.009 .008 .006 .003 .009      LDDV 1999
.061 .079 .079 .075 .072 .069 .065 .061 .059 .048      LDDT 1999
.050 .039 .030 .030 .028 .028 .017 .020 .017 .011      LDDT 1999
.014 .012 .011 .007 .017      LDDT 1999
.061 .074 .073 .066 .060 .059 .056 .049 .061 .036      HDDV 1999
.020 .027 .023 .029 .036 .023 .018 .024 .050 .039      HDDV 1999
.034 .023 .015 .009 .035      HDDV 1999
.020 .033 .031 .030 .029 .027 .025 .022 .014 .014      MC 1999
.027 .728 .000 .000 .000 .000 .000 .000 .000 .000      MC 1999
.000 .000 .000 .000 .000      MC 1999
94 20 68 20 1. 1. 095 1 2 2222 2211 220. 1.20 999.
94 68 20 2222 12 095. 12211111
94 68 20 2222 12 095.
Jef I/M      75.9 75.9 08.0 07.8 92      LAP rec: SCNME,MNTMP,MXTMP,RVP1,R
1 99 XXXX 75.9 20.6 27.3 20.6 7      SCN rec: RGN,CY,SPD,AMBTMP,PCCN,P

```

1999 Jefferson County MOBILE5a Set-up for 24-Hour Diurnals Rates

```

1      PROMPT
1 Jefferson County 1999 Control Strategy Projection Tier I, Projected I/M
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT mix
3      MYMRFG - 1999 Projected vehicle registration
1      NEWFLG - Default BER
2      IMFLAG - 1994 I/M
1      ALHFLG - No additional correction factors
5      ATPFLG - ATP & Pressure Test
5      RLFLAG - Zero-out refueling emissions
2      LOCFLG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
3      OUTFMT - 112-Descriptive format
4      PRTFLG - Print HC, CO, and NOX emission factors
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print HC = Volatile organic compounds (VOC)
3      HCFLAG - HC components
.590.240.065.037.002.001.062.003      VMT Mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,HDDV,MC
.048 .063 .063 .067 .072 .070 .075 .077 .076 .065      LDGV 1999
.060 .050 .041 .034 .030 .026 .015 .013 .011 .009      LDGV 1999
.009 .008 .006 .003 .009      LDGV 1999
.061 .079 .079 .075 .072 .069 .065 .061 .059 .048      LDGT1 1999
.050 .039 .030 .030 .028 .028 .017 .020 .017 .011      LDGT1 1999
.014 .012 .011 .007 .017      LDGT1 1999
.069 .087 .087 .083 .079 .075 .070 .066 .049 .041      LDGT2 1999
.042 .033 .014 .026 .030 .030 .018 .017 .012 .010      LDGT2 1999
.015 .011 .012 .010 .014      LDGT2 1999
.052 .068 .067 .066 .064 .062 .059 .057 .048 .044      HDGV 1999
.040 .037 .021 .026 .031 .031 .020 .026 .028 .020      HDGV 1999
.027 .026 .018 .010 .055      HDGV 1999
.048 .063 .063 .067 .072 .070 .075 .077 .076 .065      LDDV 1999
.060 .050 .041 .034 .030 .026 .015 .013 .011 .009      LDDV 1999
.009 .008 .006 .003 .009      LDDV 1999
.061 .079 .079 .075 .072 .069 .065 .061 .059 .048      LDDT 1999
.050 .039 .030 .030 .028 .028 .017 .020 .017 .011      LDDT 1999
.014 .012 .011 .007 .017      LDDT 1999
.061 .074 .073 .066 .060 .059 .056 .049 .061 .036      HDDV 1999
.020 .027 .023 .029 .036 .023 .018 .024 .050 .039      HDDV 1999
.034 .023 .015 .009 .035      HDDV 1999
.020 .033 .031 .030 .029 .027 .025 .022 .014 .014      MC 1999
.027 .728 .000 .000 .000 .000 .000 .000 .000 .000      MC 1999
.000 .000 .000 .000 .000      MC 1999
94 20 68 20 1. 1. 095 1 2 2222 2211 220. 1.20 999.
94 68 20 2222 12 095. 12211111
94 68 20 2222 12 095.
Jef I/M      70. 093. 08.0 07.8 92      LAP rec:
1 99 19.6 85.6 20.6 27.3 20.6 7      SCN rec:

```

1999 Orange County MOBILE5a Set-up for Time Period 1

```

1      PROMPT
1 Orange County 1999 Projected Control Strategy Tier I, Projected I/M      T1
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT Mix
3      MYMRFG - 1999 Projected vehicle registrations
1      NEWFLG - Default BERs
2      IMFLAG - 1994 I/M Program
1      ALHFLG - No additional correction factors
5      ATPFLG - ATP & Pressure Test
5      RLFLAG - Zero-out refueling emissions
2      LOCLFG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
4      OUTFMT - 80 column descriptive
4      PRTFLG - Print all three pollutant emission factors
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print volatile organic compounds (VOC)
1      HCFLAG - Print total HC
.590.240.065.037.002.001.062.003      VMT Mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,H
.068 .090 .087 .084 .082 .079 .074 .069 .057 .050      LDGV 1999
.047 .041 .030 .028 .023 .022 .012 .011 .010 .008      LDGV 1999
.008 .007 .005 .003 .007      LDGV 1999
.068 .091 .085 .079 .078 .072 .066 .061 .048 .042      LDGT1 1999
.041 .034 .026 .027 .027 .025 .016 .019 .018 .012      LDGT1 1999
.016 .014 .010 .008 .017      LDGT1 1999
.077 .102 .095 .088 .087 .080 .073 .066 .040 .030      LDGT2 1999
.039 .023 .012 .027 .027 .024 .016 .017 .010 .009      LDGT2 1999
.014 .010 .009 .011 .013      LDGT2 1999
.044 .059 .056 .054 .053 .051 .048 .046 .047 .030      HDGV 1999
.037 .027 .013 .035 .039 .044 .020 .025 .038 .036      HDGV 1999
.034 .037 .029 .025 .074      HDGV 1999
.068 .090 .087 .084 .082 .079 .074 .069 .057 .050      LDDV 1999
.047 .041 .030 .028 .023 .022 .012 .011 .010 .008      LDDV 1999
.008 .007 .005 .003 .007      LDDV 1999
.068 .091 .085 .079 .078 .072 .066 .061 .048 .042      LDDT 1999
.041 .034 .026 .027 .027 .025 .016 .019 .018 .012      LDDT 1999
.016 .014 .010 .008 .017      LDDT 1999
.043 .057 .052 .047 .047 .042 .037 .034 .026 .054      HDDV 1999
.012 .015 .014 .026 .065 .059 .020 .022 .094 .043      HDDV 1999
.055 .049 .022 .027 .038      HDDV 1999
.021 .027 .027 .029 .027 .025 .023 .020 .012 .016      MC 1999
.016 .756 .000 .000 .000 .000 .000 .000 .000 .000      MC 1999
.000 .000 .000 .000 .000      MC 1999
94 20 68 20 1. 1. 095 1 2 2222 2211 220. 1.20 999.
94 68 20 2222 12 095. 12211111
94 68 20 2222 12 095.
Orange I/M      75.9 75.9 08.0 07.8 92      LAP rec: SCNME,MNTMP,MXTMP,RVP1,R
1 99 XXXX 75.9 20.6 27.3 20.6 7      SCN rec: RGN,CY,SPD,AMBTMP,PCCN,P

```

1999 Orange County MOBILE5a Set-up for 24-Hour Diurnals Rates

```

1      PROMPT
1 Orange County 1999 Projected Control Strategy Tier I, Projected I/M
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT Mix
3      MYMRFG - 1999 Projected vehicle registrations
1      NEWFLG - Default BERs
2      IMFLAG - 1994 I/M Program
1      ALHFLG - No additional correction factors
5      ATPFLG - ATP & Pressure Test
5      RLFLAG - Zero-out refueling emissions
2      LOCFLG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
3      QUTFMT - 112-Descriptive format
4      PRTFLG - Print HC, CO, and NOX emission factors
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print HC = Volatile organic compounds (VOC)
3      HCFLAG - HC components
.590.240.065.037.002.001.062.003      VMT Mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,HDDV,MC
.068 .090 .087 .084 .082 .079 .074 .069 .057 .050      LDGV 1999
.047 .041 .030 .028 .023 .022 .012 .011 .010 .008      LDGV 1999
.008 .007 .005 .003 .007      LDGV 1999
.068 .091 .085 .079 .078 .072 .066 .061 .048 .042      LDGT1 1999
.041 .034 .026 .027 .027 .025 .016 .019 .018 .012      LDGT1 1999
.016 .014 .010 .008 .017      LDGT1 1999
.077 .102 .095 .088 .087 .080 .073 .066 .040 .030      LDGT2 1999
.039 .023 .012 .027 .027 .024 .016 .017 .010 .009      LDGT2 1999
.014 .010 .009 .011 .013      LDGT2 1999
.044 .059 .056 .054 .053 .051 .048 .046 .047 .030      HDGV 1999
.037 .027 .013 .035 .039 .044 .020 .025 .038 .036      HDGV 1999
.034 .037 .029 .025 .074      HDGV 1999
.068 .090 .087 .084 .082 .079 .074 .069 .057 .050      LDDV 1999
.047 .041 .030 .028 .023 .022 .012 .011 .010 .008      LDDV 1999
.008 .007 .005 .003 .007      LDDV 1999
.068 .091 .085 .079 .078 .072 .066 .061 .048 .042      LDDT 1999
.041 .034 .026 .027 .027 .025 .016 .019 .018 .012      LDDT 1999
.016 .014 .010 .008 .017      LDDT 1999
.043 .057 .052 .047 .042 .037 .034 .026 .054      HDDV 1999
.012 .015 .014 .026 .065 .059 .020 .022 .094 .043      HDDV 1999
.055 .049 .022 .027 .038      HDDV 1999
.021 .027 .027 .029 .027 .025 .023 .020 .012 .016      MC 1999
.016 .756 .000 .000 .000 .000 .000 .000 .000 .000      MC 1999
.000 .000 .000 .000 .000      MC 1999
94 20 68 20 1. 1. 095 1 2 2222 2211 220. 1.20 999.
94 68 20 2222 12 095. 12211111
94 68 20 2222 12 095.
Orange I/M      70. 093. 08.0 07.8 92      LAP rec:
1 99 19.6 85.6 20.6 27.3 20.6 7      SCN rec:

```


2006 Hardin County MOBILE5a Set-up for Time Period 1

```

1      PROMPT
1 Hardin County Projected Control 2006 Inventory Tier 1, Projected I/M T1
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT
3      MYMRFG - 2006 Projected vehicle registrations
1      NEWFLG - Default BERs
2      IMFLAG - 1994 I/M
1      ALHFLG - No additional correction factors
5      ATPFLG - ATP & Pressure Test
5      RLFLAG - Zero-out refueling emissions
2      LOCFLG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
3      QUTFMT - 112-Descriptive format
4      PRTFLG - Print all three pollutant emission factors
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print volatile organic compounds (VOC)
1      HCFLAG - Total HC
.604.348.030.010.002.002.003.001          VMT mix: LDGV,LDGT1,LDGT2,HOGV,LDDV,L
.058 .078 .080 .080 .081 .079 .075 .071 .065 .058          LDGV 2006
.052 .045 .037 .031 .025 .019 .015 .012 .009 .006          LDGV 2006
.005 .004 .004 .002 .009          LDGV 2006
.086 .092 .084 .080 .076 .072 .065 .060 .054 .047          LDGT1 2006
.041 .037 .034 .029 .023 .020 .018 .017 .013 .009          LDGT1 2006
.009 .007 .007 .005 .016          LDGT1 2006
.110 .099 .085 .079 .073 .066 .061 .055 .054 .046          LDGT2 2006
.039 .036 .035 .028 .028 .022 .019 .015 .011 .007          LDGT2 2006
.008 .006 .006 .003 .008          LDGT2 2006
.035 .036 .044 .070 .073 .063 .058 .053 .050 .047          HDGV 2006
.046 .043 .043 .049 .037 .038 .033 .027 .022 .016          HDGV 2006
.016 .018 .018 .011 .053          HDGV 2006
.058 .078 .080 .080 .081 .079 .075 .071 .065 .058          LDDV 2006
.052 .045 .037 .031 .025 .019 .015 .012 .009 .006          LDDV 2006
.005 .004 .004 .002 .009          LDDV 2006
.086 .092 .084 .080 .076 .072 .065 .060 .054 .047          LDDT 2006
.041 .037 .034 .029 .023 .020 .018 .017 .013 .009          LDDT 2006
.009 .007 .007 .005 .016          LDDT 2006
.065 .071 .069 .062 .072 .068 .058 .052 .053 .053          HDDV 2006
.057 .055 .053 .041 .025 .027 .023 .021 .013 .011          HDDV 2006
.009 .011 .010 .009 .011          HDDV 2006
.008 .017 .023 .031 .037 .045 .055 .090 .111 .101          MC 2006
.097 .385 .000 .000 .000 .000 .000 .000 .000 .000          MC 2006
.000 .000 .000 .000 .000          MC 2006
94 20 68 20 1. 1. 095 1 2 2222 2211 220. 1.20 999.
94 68 20 2222 12 095. 12211111
94 68 20 2222 12 095.
Hardin I/M          75.9 75.9 8.0 7.8 92
1 06 XXXX 75.9 20.6 27.3 20.6 7
LAP rec: SCNME,MN
SCN rec: RGN,CY,

```

2006 Hardin County MOBILE5a Set-up for 24-Hour Diurnals Rates

```

1      PROMPT
1 Hardin County Projected Control 2006 Inventory  Tier I, Projected I/M
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT
3      MYMRFG - 2006 Projected vehicle registrations
1      NEWFLG - Default BERs
2      IMFLAG - 1994 I/M
1      ALHFLG - No additional correction factors
5      ATPFLG - ATP & Pressure Test
5      RLFLAG - Zero-out refueling emissions
2      LOCFLG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
3      OUTFMT - 112-Descriptive format
4      PRTFLG - Print all three pollutant emission factors
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print volatile organic compounds (VOC)
3      HCFLAG - HC Components
.604.348.030.010.002.002.003.001          VMT mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,L
.058 .078 .080 .080 .081 .079 .075 .071 .065 .058          LDGV 2006
.052 .045 .037 .031 .025 .019 .015 .012 .009 .006          LDGV 2006
.005 .004 .004 .002 .009          LDGV 2006
.086 .092 .084 .080 .076 .072 .065 .060 .054 .047          LDGT1 2006
.041 .037 .034 .029 .023 .020 .018 .017 .013 .009          LDGT1 2006
.009 .007 .007 .005 .016          LDGT1 2006
.110 .099 .085 .079 .073 .066 .061 .055 .054 .046          LDGT2 2006
.039 .036 .035 .028 .028 .022 .019 .015 .011 .007          LDGT2 2006
.008 .006 .006 .003 .008          LDGT2 2006
.035 .036 .044 .070 .073 .063 .058 .053 .050 .047          HDGV 2006
.046 .043 .043 .049 .037 .038 .033 .027 .022 .016          HDGV 2006
.016 .018 .018 .011 .053          HDGV 2006
.058 .078 .080 .080 .081 .079 .075 .071 .065 .058          LDDV 2006
.052 .045 .037 .031 .025 .019 .015 .012 .009 .006          LDDV 2006
.005 .004 .004 .002 .009          LDDV 2006
.086 .092 .084 .080 .076 .072 .065 .060 .054 .047          LDDT 2006
.041 .037 .034 .029 .023 .020 .018 .017 .013 .009          LDDT 2006
.009 .007 .007 .005 .016          LDDT 2006
.065 .071 .069 .062 .072 .068 .058 .052 .053 .053          HDDV 2006
.057 .055 .053 .041 .025 .027 .023 .021 .013 .011          HDDV 2006
.009 .011 .010 .009 .011          HDDV 2006
.008 .017 .023 .031 .037 .045 .055 .090 .111 .101          MC 2006
.097 .385 .000 .000 .000 .000 .000 .000 .000 .000          MC 2006
.000 .000 .000 .000 .000          MC 2006
94 20 68 20 1. 1. 095 1 2 2222 2211 220. 1.20 999.
94 68 20 2222 12 095. 12211111
94 68 20 2222 12 095.
Hardin I/M          70. 093. 8.0 7.8 92
1 06 19.6 85.6 20.6 27.3 20.6 7
LAP rec: SCNME,MN
SCN rec: RGN,CY,

```

2006 Jefferson County MOBILE5a Set-up for Time Period 1

```

1      PROMPT
1 Jefferson County 2006 Control Strategy Projection Tier I, Projected I/M T1
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT mix
3      MYMRFG - 2006 Projected vehicle registration
1      NEWFLG - Default BER
2      IMFLAG - 1994 I/M
1      ALHFLG - No additional correction factors
5      ATPFLG - ATP & Pressure Test
5      RLFLAG - Zero-out refueling emissions
2      LOCFLG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
3      QUTFMT - 112-Descriptive format
4      PRTFLG - Print all three pollutant emission factors
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print volatile organic compounds (VOC)
1      HCFLAG - Total HC
.590.240.065.037.002.001.062.003      VMT Mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,HD
.069 .083 .083 .082 .079 .076 .072 .067 .061 .055      LDGV 2006
.048 .042 .036 .030 .024 .020 .016 .013 .010 .007      LDGV 2006
.006 .005 .004 .003 .010      LDGV 2006
.077 .088 .083 .079 .075 .071 .066 .061 .055 .050      LDGT1 2006
.045 .040 .036 .031 .025 .022 .017 .015 .012 .009      LDGT1 2006
.008 .007 .006 .004 .017      LDGT1 2006
.070 .087 .089 .084 .081 .075 .070 .063 .057 .051      LDGT2 2006
.046 .041 .036 .031 .029 .019 .015 .013 .011 .006      LDGT2 2006
.007 .007 .006 .003 .005      LDGT2 2006
.042 .061 .061 .058 .057 .060 .060 .060 .057 .052      HDGV 2006
.051 .048 .045 .040 .036 .030 .027 .025 .021 .016      HDGV 2006
.015 .014 .012 .009 .043      HDGV 2006
.069 .083 .083 .082 .079 .076 .072 .067 .061 .055      LDDV 2006
.048 .042 .036 .030 .024 .020 .016 .013 .010 .007      LDDV 2006
.006 .005 .004 .003 .010      LDDV 2006
.077 .088 .083 .079 .075 .071 .066 .061 .055 .050      LDDT 2006
.045 .040 .036 .031 .025 .022 .017 .015 .012 .009      LDDT 2006
.008 .007 .006 .004 .017      LDDT 2006
.022 .038 .050 .048 .054 .063 .058 .067 .067 .065      HDDV 2006
.064 .060 .052 .049 .031 .046 .029 .021 .018 .013      HDDV 2006
.012 .012 .007 .005 .049      HDDV 2006
.030 .058 .076 .087 .093 .092 .084 .077 .068 .060      MC 2006
.053 .221 .000 .000 .000 .000 .000 .000 .000 .000      MC 2006
.000 .000 .000 .000 .000      MC 2006
94 20 68 20 1. 1. 095 1 2 2222 2211 220. 1.20 999.
94 68 20 2222 12 095. 12211111
94 68 20 2222 12 095.
Jef I/M      75.9 75.9 08.0 07.8 92      LAP rec: SCNME,MNTMP,MXTMP,RVP1,R
1 06 XXXX 75.9 20.6 27.3 20.6 7      SCN rec: RGN,CY,SPD,AMBTMP,PCCN,P

```

2006 Jefferson County MOBILE5a Set-up for 24-Hour Diurnals Rates

```

1          PROMPT
1 Jefferson County 2006 Control Strategy Projection Tier I, Projected I/M
1          TAMFLG - Default: Tampering Rates
1          SPDFLG - User input: one speed for all vehicle types
3          VMFLAG - 1996 Projected VMT mix
3          MYMRFG - 2006 Projected vehicle registration
1          NEWFLG - Default BER
2          IMFLAG - 1994 I/M
1          ALHFLG - No additional correction factors
5          ATPFLG - ATP & Pressure Test
5          RLFLAG - Zero-out refueling emissions
2          LOCFLG - User input: one LAP record for all scenarios
1          TEMFLG - MOBILE5A calculates exhaust temperatures
3          OUTFMT - 112-Descriptive format
4          PRTFLG - Print all three pollutant emission factors
1          IDLFLG - No idle emissions calculated or printed
3          NMHFLG - Print volatile organic compounds (VOC)
3          HCFLAG - HC components
.590.240.065.037.002.001.062.003      VMT Mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,HD
.069 .083 .083 .082 .079 .076 .072 .067 .061 .055      LDGV 2006
.048 .042 .036 .030 .024 .020 .016 .013 .010 .007      LDGV 2006
.006 .005 .004 .003 .010      LDGV 2006
.077 .088 .083 .079 .075 .071 .066 .061 .055 .050      LDGT1 2006
.045 .040 .036 .031 .025 .022 .017 .015 .012 .009      LDGT1 2006
.008 .007 .006 .004 .017      LDGT1 2006
.070 .087 .089 .084 .081 .075 .070 .063 .057 .051      LDGT2 2006
.046 .041 .036 .031 .029 .019 .015 .013 .011 .006      LDGT2 2006
.007 .007 .006 .003 .005      LDGT2 2006
.042 .061 .061 .058 .057 .060 .060 .060 .057 .052      HDGV 2006
.051 .048 .045 .040 .036 .030 .027 .025 .021 .016      HDGV 2006
.015 .014 .012 .009 .043      HDGV 2006
.069 .083 .083 .082 .079 .076 .072 .067 .061 .055      LDDV 2006
.048 .042 .036 .030 .024 .020 .016 .013 .010 .007      LDDV 2006
.006 .005 .004 .003 .010      LDDV 2006
.077 .088 .083 .079 .075 .071 .066 .061 .055 .050      LDDT 2006
.045 .040 .036 .031 .025 .022 .017 .015 .012 .009      LDDT 2006
.008 .007 .006 .004 .017      LDDT 2006
.022 .038 .050 .048 .054 .063 .058 .067 .067 .065      HDDV 2006
.064 .060 .052 .049 .031 .046 .029 .021 .018 .013      HDDV 2006
.012 .012 .007 .005 .049      HDDV 2006
.030 .058 .076 .087 .093 .092 .084 .077 .068 .060      MC 2006
.053 .221 .000 .000 .000 .000 .000 .000 .000 .000      MC 2006
.000 .000 .000 .000 .000      MC 2006
94 20 68 20 1. 1. 095 1 2 2222 2211 220. 1.20 999.
94 68 20 2222 12 095. 12211111
94 68 20 2222 12 095.
Jef I/M          70. 093. 08.0 07.8 92      LAP rec: SCNME,MNTMP,MXTMP,RVP1,R
1 06 19.6 85.6 20.6 27.3 20.6 7      SCN rec: RGN,CY,SPD,AMBTMP,PCCN,P

```

2006 Orange County MOBILE5a Set-up for Time Period 1

```

1      PROMPT
1 Orange County 2006 Projected Control Strategy Tier I, Projected I/M      T1
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT Mix
3      MYMRFG - 2005 Projected vehicle registrations
1      NEWFLG - Default BERs
2      IMFLAG - 1994 I/M Program
1      ALHFLG - No additional correction factors
5      ATPFLG - ATP & Pressure Test
5      RLFLAG - Zero-out refueling emissions
2      LOCFLG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
3      OUTFMT - 112-Descriptive format
4      PRTFLG - Print all three pollutant emission factors
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print volatile organic compounds (VOC)
1      HCFLAG - Total HC
.590.240.065.037.002.001.062.003      VMT Mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,H
.043 .079 .088 .088 .085 .081 .077 .071 .065 .057      LDGV 2006
.049 .050 .041 .031 .023 .016 .012 .009 .007 .005      LDGV 2006
.004 .003 .003 .002 .011      LDGV 2006
.050 .103 .109 .097 .087 .078 .070 .061 .054 .047      LDGT1 2006
.041 .036 .031 .026 .023 .016 .013 .010 .008 .007      LDGT1 2006
.005 .004 .003 .003 .017      LDGT1 2006
.073 .198 .158 .115 .078 .060 .051 .044 .039 .034      LDGT2 2006
.029 .025 .021 .017 .014 .011 .008 .006 .005 .003      LDGT2 2006
.002 .002 .001 .001 .005      LDGT2 2006
.015 .031 .044 .048 .045 .065 .072 .071 .058 .063      HDGV 2006
.065 .053 .053 .045 .033 .039 .027 .025 .021 .016      HDGV 2006
.018 .014 .014 .009 .057      HDGV 2006
.043 .079 .088 .088 .085 .081 .077 .071 .065 .057      LDDV 2006
.049 .050 .041 .031 .023 .016 .012 .009 .007 .005      LDDV 2006
.004 .003 .003 .002 .011      LDDV 2006
.050 .103 .109 .097 .087 .078 .070 .061 .054 .047      LDDT 2006
.041 .036 .031 .026 .023 .016 .013 .010 .008 .007      LDDT 2006
.005 .004 .003 .003 .017      LDDT 2006
.008 .042 .017 .059 .041 .070 .087 .061 .087 .097      HDDV 2006
.055 .064 .054 .066 .027 .028 .030 .017 .016 .013      HDDV 2006
.013 .019 .016 .007 .007      HDDV 2006
.013 .021 .032 .041 .052 .060 .066 .063 .068 .074      MC 2006
.079 .432 .000 .000 .000 .000 .000 .000 .000 .000      MC 2006
.000 .000 .000 .000 .000      MC 2006
94 20 68 20 1. 1. 095 1 2 2222 2211 220. 1.20 999.
94 68 20 2222 12 095. 12211111
94 68 20 2222 12 095.
Orange I/M      75.9 75.9 08.0 07.8 92      LAP rec: SCNME,MNTMP,MXTMP,RVP1,R
1 06 XXXX 75.9 20.6 27.3 20.6 7      SCN rec: RGN,CY,SPD,AMBTMP,PCCN,P

```

2006 Orange County MOBILE5a Set-up for 24-Hour Diurnals Rates

```

1      PROMPT
1 Orange County 2006 Projected Control Strategy Tier 1, Projected I/M
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT Mix
3      MYMRFG - 2005 Projected vehicle registrations
1      NEWFLG - Default BERs
2      IMFLAG - 1994 I/M Program
1      ALHFLG - No additional correction factors
5      ATPFLG - ATP & Pressure Test
5      RLFLAG - Zero-out refueling emissions
2      LOCFLG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
3      OUTFMT - 112-Descriptive format
4      PRTFLG - Print all three pollutant emission factors
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print volatile organic compounds (VOC)
3      HCFLAG - HC components
.590.240.065.037.002.001.062.003      VMT Mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,H
.043 .079 .088 .088 .085 .081 .077 .071 .065 .057      LDGV 2006
.049 .050 .041 .031 .023 .016 .012 .009 .007 .005      LDGV 2006
.004 .003 .003 .002 .011      LDGV 2006
.050 .103 .109 .097 .087 .078 .070 .061 .054 .047      LDGT1 2006
.041 .036 .031 .026 .023 .016 .013 .010 .008 .007      LDGT1 2006
.005 .004 .003 .003 .017      LDGT1 2006
.073 .198 .158 .115 .078 .060 .051 .044 .039 .034      LDGT2 2006
.029 .025 .021 .017 .014 .011 .008 .006 .005 .003      LDGT2 2006
.002 .002 .001 .001 .005      LDGT2 2006
.015 .031 .044 .048 .045 .065 .072 .071 .058 .063      HDGV 2006
.065 .053 .053 .045 .033 .039 .027 .025 .021 .016      HDGV 2006
.018 .014 .014 .009 .057      HDGV 2006
.043 .079 .088 .088 .085 .081 .077 .071 .065 .057      LDDV 2006
.049 .050 .041 .031 .023 .016 .012 .009 .007 .005      LDDV 2006
.004 .003 .003 .002 .011      LDDV 2006
.050 .103 .109 .097 .087 .078 .070 .061 .054 .047      LDDT 2006
.041 .036 .031 .026 .023 .016 .013 .010 .008 .007      LDDT 2006
.005 .004 .003 .003 .017      LDDT 2006
.008 .042 .017 .059 .041 .070 .087 .061 .087 .097      HDDV 2006
.055 .064 .054 .066 .027 .028 .030 .017 .016 .013      HDDV 2006
.013 .019 .016 .007 .007      HDDV 2006
.013 .021 .032 .041 .052 .060 .066 .063 .068 .074      MC 2006
.079 .432 .000 .000 .000 .000 .000 .000 .000 .000      MC 2006
.000 .000 .000 .000 .000      MC 2006
94 20 68 20 1. 1. 095 1 2 2222 2211 220. 1.20 999.
94 68 20 2222 12 095. 12211111
94 68 20 2222 12 095.
Orange I/M      70. 093. 08.0 07.8 92      LAP rec: SCNME,MNTMP,MXTMP,RVP1,R
1 06 19.6 85.6 20.6 27.3 20.6 7      SCN rec: RGN,CY,SPD,AMBTMP,PCCN,P

```

2016 Hardin County MOBILE5a Set-up for Time Period 1

```

1          PROMPT
1 Hardin County Projected Control 2016 Inventory Tier I, Projected I/M      T1
1          TAMFLG - Default: Tampering Rates
1          SPDFLG - User input: one speed for all vehicle types
3          VMFLAG - 1996 Projected VMT
3          MYMRFG - 2016 Projected vehicle registrations
1          NEWFLG - Default BERS
2          IMFLAG - 1994 I/M
1          ALHFLG - No additional correction factors
5          ATPFLG - ATP & Pressure Test
5          RLFLAG - Zero-out refueling emissions
2          LOCFLG - User input: one LAP record for all scenarios
1          TEMFLG - MOBILE5A calculates exhaust temperatures
4          OUTFMT - 80 column descriptive
4          PRTFLG - Print all three pollutants
1          IDLFLG - No idle emissions calculated or printed
3          NMHFLG - Print volatile organic compounds (VOC)
1          HCFLAG - Print total HC
.604.348.030.010.002.002.003.001          VMT mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,L
.058 .079 .080 .080 .081 .079 .075 .072 .065 .058          LDGV 2016
.052 .045 .037 .031 .024 .019 .014 .011 .009 .006          LDGV 2016
.005 .004 .003 .002 .009          LDGV 2016
.087 .095 .084 .080 .077 .072 .064 .060 .053 .046          LDGT1 2016
.040 .036 .032 .028 .024 .020 .018 .015 .013 .011          LDGT1 2016
.009 .008 .006 .005 .018          LDGT1 2016
.110 .099 .084 .080 .071 .066 .059 .055 .054 .046          LDGT2 2016
.038 .036 .035 .028 .027 .024 .020 .015 .012 .010          LDGT2 2016
.008 .006 .005 .004 .009          LDGT2 2016
.025 .027 .035 .060 .063 .056 .052 .047 .046 .046          HDGV 2016
.047 .044 .046 .050 .040 .039 .042 .041 .038 .030          HDGV 2016
.024 .018 .016 .013 .057          HDGV 2016
.058 .079 .080 .080 .081 .079 .075 .072 .065 .058          LDDV 2016
.052 .045 .037 .031 .024 .019 .014 .011 .009 .006          LDDV 2016
.005 .004 .003 .002 .009          LDDV 2016
.087 .095 .084 .080 .077 .072 .064 .060 .053 .046          LDDT 2016
.040 .036 .032 .028 .024 .020 .018 .015 .013 .011          LDDT 2016
.009 .008 .006 .005 .018          LDDT 2016
.106 .093 .079 .069 .068 .069 .065 .060 .053 .049          HDDV 2016
.043 .041 .038 .034 .030 .023 .020 .017 .010 .008          HDDV 2016
.010 .005 .003 .002 .005          HDDV 2016
.007 .017 .025 .032 .040 .048 .058 .075 .098 .096          MC 2016
.109 .394 .000 .000 .000 .000 .000 .000 .000 .000          MC 2016
.000 .000 .000 .000 .000          MC 2016
94 20 68 20 1. 1. 095 1 2 2222 2211 220. 1.20 999.
94 68 20 2222 12 095. 12211111
94 68 20 2222 12 095.
Hardin I/M          75.9 75.9 8.0 7.8 92          LAP rec: SCNME,MN
1 16 XXXX 75.9 20.6 27.3 20.6 7          SCN rec: RGN,CY,

```

2016 Hardin County MOBILE5a Set-up for 24-Hour Diurnals Rates

```

1      PROMPT
Hardin County Projected Control 2016 Inventory Tier I, Projected I/M, Diurnal
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT
3      MYMRFG - 2016 Projected vehicle registrations
1      NEWFLG - Default BERs
2      IMFLAG - 1994 I/M
1      ALHFLG - No additional correction factors
5      ATPFLG - ATP & Pressure Test
5      RLFLAG - Zero-out refueling emissions
2      LOCFLG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
3      OUTFMT - 120 column descriptive
4      PRTFLG - Print all three pollutants
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print volatile organic compounds (VOC)
3      HCFLAG - HC components
.604.348.030.010.002.002.003.001      VMT mix: LDGV,LDGT1,LDGT2,HOGV,LDDV,L
.058 .079 .080 .080 .081 .079 .075 .072 .065 .058      LDGV 2016
.052 .045 .037 .031 .024 .019 .014 .011 .009 .006      LDGV 2016
.005 .004 .003 .002 .009      LDGV 2016
.087 .095 .084 .080 .077 .072 .064 .060 .053 .046      LDGT1 2016
.040 .036 .032 .028 .024 .020 .018 .015 .013 .011      LDGT1 2016
.009 .008 .006 .005 .018      LDGT1 2016
.110 .099 .084 .080 .071 .066 .059 .055 .054 .046      LDGT2 2016
.038 .036 .035 .028 .027 .024 .020 .015 .012 .010      LDGT2 2016
.008 .006 .005 .004 .009      LDGT2 2016
.025 .027 .035 .060 .063 .056 .052 .047 .046 .046      HDGV 2016
.047 .044 .046 .050 .040 .039 .042 .041 .038 .030      HDGV 2016
.024 .018 .016 .013 .057      HDGV 2016
.058 .079 .080 .080 .081 .079 .075 .072 .065 .058      LDDV 2016
.052 .045 .037 .031 .024 .019 .014 .011 .009 .006      LDDV 2016
.005 .004 .003 .002 .009      LDDV 2016
.087 .095 .084 .080 .077 .072 .064 .060 .053 .046      LDDT 2016
.040 .036 .032 .028 .024 .020 .018 .015 .013 .011      LDDT 2016
.009 .008 .006 .005 .018      LDDT 2016
.106 .093 .079 .069 .068 .069 .065 .060 .053 .049      HDDV 2016
.043 .041 .038 .034 .030 .023 .020 .017 .010 .008      HDDV 2016
.010 .005 .003 .002 .005      HDDV 2016
.007 .017 .025 .032 .040 .048 .058 .075 .098 .096      MC 2016
.109 .394 .000 .000 .000 .000 .000 .000 .000 .000      MC 2016
.000 .000 .000 .000 .000      MC 2016
94 20 68 20 1. 1. 095 1 2 2222 2211 220. 1.20 999.
94 68 20 2222 12 095. 12211111
94 68 20 2222 12 095.
Hardin I/M      70.0 93.0 8.0 7.8 92
1 16 19.6 85.6 20.6 27.3 20.6 7
LAP rec: SCNME,MN
SCN rec: RGN,CY,

```


2016 Jefferson County MOBILE5a Set-up for Time Period 1

```

1      PROMPT
1 Jefferson County 2016 Control Strategy Projection Tier I, Projected I/M    T1
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT mix
3      MYMRFG - 2016 Projected vehicle registration
1      NEWFLG - Default BER
2      IMFLAG - 1994 I/M
1      ALHFLG - No additional correction factors
5      ATPFLG - ATP & Pressure Test
5      RLFLAG - Zero-out refueling emissions
2      LOCFLG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
4      OUTFMT - 80 Column descriptive
4      PRTFLG - Print all three pollutant emission factors
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print volatile organic compounds (VOC)
1      HCFLAG - Print total HC
.590.240.065.037.002.001.062.003      VMT Mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,HD
.073 .088 .087 .084 .081 .077 .072 .066 .060 .054      LDGV 2016
.047 .040 .034 .028 .023 .018 .014 .011 .009 .007      LDGV 2016
.005 .004 .003 .003 .010      LDGV 2016
.077 .089 .083 .079 .075 .070 .066 .061 .056 .050      LDGT1 2016
.045 .040 .035 .030 .026 .022 .018 .015 .012 .010      LDGT1 2016
.008 .007 .006 .005 .017      LDGT1 2016
.071 .088 .090 .085 .081 .076 .070 .063 .057 .051      LDGT2 2016
.045 .040 .035 .030 .025 .020 .017 .013 .011 .008      LDGT2 2016
.007 .005 .004 .003 .005      LDGT2 2016
.046 .067 .066 .060 .059 .061 .059 .059 .055 .052      HDGV 2016
.049 .045 .041 .037 .031 .029 .026 .023 .020 .018      HDGV 2016
.015 .013 .011 .009 .047      HDGV 2016
.073 .088 .087 .084 .081 .077 .072 .066 .060 .054      LDDV 2016
.047 .040 .034 .028 .023 .018 .014 .011 .009 .007      LDDV 2016
.005 .004 .003 .003 .010      LDDV 2016
.077 .089 .083 .079 .075 .070 .066 .061 .056 .050      LDDT 2016
.045 .040 .035 .030 .026 .022 .018 .015 .012 .010      LDDT 2016
.008 .007 .006 .005 .017      LDDT 2016
.023 .038 .049 .049 .054 .062 .066 .064 .065 .062      HDDV 2016
.061 .056 .050 .047 .038 .032 .024 .025 .019 .015      HDDV 2016
.014 .011 .008 .007 .062      HDDV 2016
.039 .078 .101 .109 .108 .097 .079 .066 .054 .046      MC 2016
.040 .183 .000 .000 .000 .000 .000 .000 .000 .000      MC 2016
.000 .000 .000 .000 .000      MC 2016
94 20 68 20 1. 1. 095 1 2 2222 2211 220. 1.20 999.
94 68 20 2222 12 095. 12211111
94 68 20 2222 12 095.
Jef I/M      75.9 75.9 08.0 07.8 92      LAP rec: SCNME,MNTMP,MXTMP,RVP1,R
1 16 XXXX 75.9 20.6 27.3 20.6 7      SCN rec: RGN,CY,SPD,AMBTMP,PCCN,P

```

2016 Jefferson County MOBILE5a Set-up for 24-Hour Diurnals Rates

1	PROMPT	
	Jefferson County 2016 Control Strategy Projection Tier I, Projected I/M, Diurna	
1	TAMFLG - Default: Tampering Rates	
1	SPDFLG - User input: one speed for all vehicle types	
3	VMFLAG - 1996 Projected VMT mix	
3	MYMRFG - 2016 Projected vehicle registration	
1	NEWFLG - Default BER	
2	IMFLAG - 1994 I/M	
1	ALHFLG - No additional correction factors	
5	ATPFLG - ATP & Pressure Test	
5	RLFLAG - Zero-out refueling emissions	
2	LOCFLG - User input: one LAP record for all scenarios	
1	TEMFLG - MOBILE5A calculates exhaust temperatures	
3	OUTFMT - 120 Column descriptive	
4	PRTFLG - Print all three pollutant emission factors	
1	IDLFLG - No idle emissions calculated or printed	
3	NMHLFG - Print volatile organic compounds (VOC)	
3	HCFLAG - Print total HC	
.590.240.065.037.002.001.062.003 VMT Mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,HD		
.073	.088 .087 .084 .081 .077 .072 .066 .060 .054	LDGV 2016
.047	.040 .034 .028 .023 .018 .014 .011 .009 .007	LDGV 2016
.005	.004 .003 .003 .010	LDGV 2016
.077	.089 .083 .079 .075 .070 .066 .061 .056 .050	LDGT1 2016
.045	.040 .035 .030 .026 .022 .018 .015 .012 .010	LDGT1 2016
.008	.007 .006 .005 .017	LDGT1 2016
.071	.088 .090 .085 .081 .076 .070 .063 .057 .051	LDGT2 2016
.045	.040 .035 .030 .025 .020 .017 .013 .011 .008	LDGT2 2016
.007	.005 .004 .003 .005	LDGT2 2016
.046	.067 .066 .060 .059 .061 .059 .059 .055 .052	HDGV 2016
.049	.045 .041 .037 .031 .029 .026 .023 .020 .018	HDGV 2016
.015	.013 .011 .009 .047	HDGV 2016
.073	.088 .087 .084 .081 .077 .072 .066 .060 .054	LDDV 2016
.047	.040 .034 .028 .023 .018 .014 .011 .009 .007	LDDV 2016
.005	.004 .003 .003 .010	LDDV 2016
.077	.089 .083 .079 .075 .070 .066 .061 .056 .050	LDDT 2016
.045	.040 .035 .030 .026 .022 .018 .015 .012 .010	LDDT 2016
.008	.007 .006 .005 .017	LDDT 2016
.023	.038 .049 .049 .054 .062 .066 .064 .065 .062	HDDV 2016
.061	.056 .050 .047 .038 .032 .024 .025 .019 .015	HDDV 2016
.014	.011 .008 .007 .062	HDDV 2016
.039	.078 .101 .109 .108 .097 .079 .066 .054 .046	MC 2016
.040	.183 .000 .000 .000 .000 .000 .000 .000 .000	MC 2016
.000	.000 .000 .000 .000	MC 2016
94	20 68 20 1. 1. 095 1 2 2222 2211 220. 1.20 999.	
94	68 20 2222 12 095. 12211111	
94	68 20 2222 12 095.	
Jef I/M	70.0 93.0 08.0 07.8 92	LAP rec: SCNME,MNTMP,MXTMP,RVP1,R
1	16 19.6 85.6 20.6 27.3 20.6 7	SCN rec: RGN,CY,SPD,AMBTMP,PCCN,P

2016 Orange County MOBILE5a Set-up for Time Period 1

```

1      PROMPT
1 Orange County 2016 Projected Control Strategy Tier I, Projected I/M      T1
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT Mix
3      MYMRFG - 2016 Projected vehicle registrations
1      NEWFLG - Default BERS
2      IMFLAG - 1994 I/M Program
1      ALHFLG - No additional correction factors
5      ATPFLG - ATP & Pressure Test
5      RLFLAG - Zero-out refueling emissions
2      LOCFLG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
4      OUTFMT - 80 column descriptive
4      PRTFLG - Print all three pollutant emission factors
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print volatile organic compounds (VOC)
1      HCFLAG - Print total HC
.590.240.065.037.002.001.062.003      VMT Mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,H
.043 .080 .089 .089 .085 .082 .077 .072 .066 .058      LDGV 2016
.050 .042 .035 .029 .023 .018 .014 .011 .008 .006      LDGV 2016
.004 .004 .003 .002 .008      LDGV 2016
.049 .106 .113 .099 .088 .077 .069 .060 .053 .046      LDGT1 2016
.040 .034 .029 .024 .020 .017 .014 .011 .009 .007      LDGT1 2016
.006 .005 .004 .003 .019      LDGT1 2016
.046 .141 .140 .120 .087 .071 .060 .061 .050 .041      LDGT2 2016
.033 .028 .023 .019 .016 .013 .011 .008 .007 .005      LDGT2 2016
.004 .003 .002 .002 .008      LDGT2 2016
.016 .032 .049 .052 .048 .065 .068 .072 .061 .069      HDGV 2016
.062 .051 .047 .039 .034 .033 .031 .025 .021 .019      HDGV 2016
.018 .014 .012 .010 .051      HDGV 2016
.043 .080 .089 .089 .085 .082 .077 .072 .066 .058      LDDV 2016
.050 .042 .035 .029 .023 .018 .014 .011 .008 .006      LDDV 2016
.004 .004 .003 .002 .008      LDDV 2016
.049 .106 .113 .099 .088 .077 .069 .060 .053 .046      LDDT 2016
.040 .034 .029 .024 .020 .017 .014 .011 .009 .007      LDDT 2016
.006 .005 .004 .003 .019      LDDT 2016
.003 .005 .022 .056 .034 .042 .051 .051 .052 .057      HDDV 2016
.049 .100 .040 .068 .037 .052 .059 .035 .053 .048      HDDV 2016
.017 .020 .017 .026 .004      HDDV 2016
.015 .028 .043 .054 .066 .075 .079 .072 .077 .081      MC 2016
.087 .322 .000 .000 .000 .000 .000 .000 .000 .000      MC 2016
.000 .000 .000 .000 .000      MC 2016
94 20 68 20 1. 1. 095 1 2 2222 2211 220. 1.20 999.
94 68 20 2222 12 095. 12211111
94 68 20 2222 12 095.
Orange I/M      75.9 75.9 08.0 07.8 92      LAP rec: SCNME,MNTMP,MXTMP,RVP1,R
1 16 XXXX 75.9 20.6 27.3 20.6 7      SCN rec: RGN,CY,SPD,AMBTMP,PCCN,P

```

2016 Orange County MOBILE5a Set-up for 24-Hour Diurnals Rates

```

1      PROMPT
Orange County 2016 Projected Control Strategy Tier I, Projected I/M, Diurnal
1      TAMFLG - Default: Tampering Rates
1      SPDFLG - User input: one speed for all vehicle types
3      VMFLAG - 1996 Projected VMT Mix
3      MYMRFG - 2016 Projected vehicle registrations
1      NEWFLG - Default BERs
2      IMFLAG - 1994 I/M Program
1      ALHFLG - No additional correction factors
5      ATPFLG - ATP & Pressure Test
5      RLFLAG - Zero-out refueling emissions
2      LOCFLG - User input: one LAP record for all scenarios
1      TEMFLG - MOBILE5A calculates exhaust temperatures
3      OUTFMT - 120 column descriptive
4      PRTFLG - Print all three pollutant emission factors
1      IDLFLG - No idle emissions calculated or printed
3      NMHFLG - Print volatile organic compounds (VOC)
3      HCFLAG - HC components
.590.240.065.037.002.001.062.003      VMT Mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,H
.043 .080 .089 .089 .085 .082 .077 .072 .066 .058      LDGV 2016
.050 .042 .035 .029 .023 .018 .014 .011 .008 .006      LDGV 2016
.004 .004 .003 .002 .008      LDGV 2016
.049 .106 .113 .099 .088 .077 .069 .060 .053 .046      LDGT1 2016
.040 .034 .029 .024 .020 .017 .014 .011 .009 .007      LDGT1 2016
.006 .005 .004 .003 .019      LDGT1 2016
.046 .141 .140 .120 .087 .071 .060 .061 .050 .041      LDGT2 2016
.033 .028 .023 .019 .016 .013 .011 .008 .007 .005      LDGT2 2016
.004 .003 .002 .002 .008      LDGT2 2016
.016 .032 .049 .052 .048 .065 .068 .072 .061 .069      HDGV 2016
.062 .051 .047 .039 .034 .033 .031 .025 .021 .019      HDGV 2016
.018 .014 .012 .010 .051      HDGV 2016
.043 .080 .089 .089 .085 .082 .077 .072 .066 .058      LDDV 2016
.050 .042 .035 .029 .023 .018 .014 .011 .008 .006      LDDV 2016
.004 .004 .003 .002 .008      LDDV 2016
.049 .106 .113 .099 .088 .077 .069 .060 .053 .046      LDDT 2016
.040 .034 .029 .024 .020 .017 .014 .011 .009 .007      LDDT 2016
.006 .005 .004 .003 .019      LDDT 2016
.003 .005 .022 .056 .034 .042 .051 .051 .052 .057      HDDV 2016
.049 .100 .040 .068 .037 .052 .059 .035 .053 .048      HDDV 2016
.017 .020 .017 .026 .004      HDDV 2016
.015 .028 .043 .054 .066 .075 .079 .072 .077 .081      MC 2016
.087 .322 .000 .000 .000 .000 .000 .000 .000 .000      MC 2016
.000 .000 .000 .000 .000      MC 2016
94 20 68 20 1. 1. 095 1 2 2222 2211 220. 1.20 999.
94 68 20 2222 12 095. 12211111
94 68 20 2222 12 095.
Orange I/M      70.0 93.0 08.0 07.8 92      LAP rec: SCNME,MNTMP,MXTMP,RVP1,R
1 16 19.6 85.6 20.6 27.3 20.6 7      SCN rec: RGN,CY,SPD,AMBTMP,PCCN,P

```


APPENDIX B: MOBILE5a EMISSION RATES

The purpose of this Appendix is to present tabular summaries of the emission rates developed and used in the FY-94 TIP Conformity Analyses for Jefferson, Orange, and Hardin Counties. The emission rates are presented in the following order:

1996 Hardin County
1999 Hardin County
2006 Hardin County
2016 Hardin County

1996 Jefferson County
1999 Jefferson County
2006 Jefferson County
2016 Jefferson County

1996 Orange County
1999 Orange County
2006 Orange County
2016 Orange County

1996 JOHRTS Diurnal Rates
1999 JOHRTS Diurnal Rates
2006 JOHRTS Diurnal Rates
2016 JOHRTS Diurnal Rates

Hardin 1996 Time Period 1 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HOGV	LDDV	LDDT	HDDV	MC
3	10.08572	12.81151	14.04969	21.44807	1.62326	2.32586	6.52089	16.16701
4	7.35300	9.44769	10.35384	17.50894	1.54113	2.20818	6.19097	13.62833
5	5.83231	7.53795	8.23509	15.13442	1.46445	2.09830	5.88291	11.74806
6	4.86810	6.31021	6.86396	13.44379	1.39280	1.99565	5.59510	10.32884
7	4.20391	5.45683	5.90729	12.12537	1.32583	1.89968	5.32606	9.23908
8	3.77840	4.89431	5.27224	11.16173	1.26319	1.80993	5.07441	8.38916
9	3.44989	4.45775	4.77991	10.32377	1.20456	1.72593	4.83892	7.71674
10	3.18348	4.10346	4.38168	9.57675	1.14967	1.64728	4.61841	7.17768
11	2.96228	3.80917	4.05229	8.90748	1.09825	1.57360	4.41183	6.74014
12	2.77499	3.55990	3.77461	8.30549	1.05005	1.50454	4.21821	6.38080
13	2.61378	3.34517	3.53662	7.76227	1.00485	1.43977	4.03663	6.08227
14	2.47303	3.15744	3.32966	7.27075	0.96244	1.37901	3.86627	5.83146
15	2.34863	2.99118	3.14734	6.82492	0.92264	1.32198	3.70636	5.61833
16	2.23748	2.84222	2.98485	6.41965	0.88525	1.26841	3.55619	5.43514
17	2.13723	2.70737	2.83852	6.05053	0.85014	1.21809	3.41511	5.27585
18	2.04605	2.58417	2.70549	5.71368	0.81713	1.17080	3.28252	5.13568
19	1.96247	2.47067	2.58353	5.40574	0.78609	1.12633	3.15785	5.01089
20	1.88170	2.37623	2.48145	5.12777	0.75690	1.08451	3.04059	4.89849
21	1.80974	2.29048	2.38972	4.87915	0.72944	1.04516	2.93026	4.79613
22	1.74395	2.21191	2.30582	4.65157	0.70359	1.00812	2.82642	4.70193
23	1.68351	2.13956	2.22869	4.44302	0.67925	0.97326	2.72866	4.61444
24	1.62776	2.07266	2.15744	4.25165	0.65634	0.94042	2.63660	4.53251
25	1.57614	2.01054	2.09137	4.07588	0.63475	0.90949	2.54989	4.45528
26	1.52817	1.95270	2.02988	3.91424	0.61442	0.88036	2.46820	4.38210
27	1.48345	1.89870	1.97248	3.76547	0.59526	0.85290	2.39124	4.31250
28	1.44164	1.84815	1.91877	3.62840	0.57720	0.82703	2.31871	4.24615
29	1.40245	1.80075	1.86839	3.50201	0.56019	0.80266	2.25036	4.18286
30	1.36562	1.75625	1.82107	3.38537	0.54416	0.77968	2.18595	4.12248
31	1.33092	1.71441	1.77656	3.27765	0.52905	0.75803	2.12525	4.06500
32	1.29818	1.67503	1.73464	3.17810	0.51481	0.73763	2.06806	4.01037
33	1.26722	1.63795	1.69513	3.08605	0.50140	0.71841	2.01418	3.95869
34	1.23789	1.60300	1.65787	3.00089	0.48876	0.70031	1.96342	3.90995
35	1.21005	1.57005	1.62272	2.92208	0.47687	0.68327	1.91564	3.86426
36	1.18360	1.53896	1.58954	2.84912	0.46567	0.66722	1.87066	3.82167
37	1.15841	1.50963	1.55821	2.78158	0.45514	0.65213	1.82834	3.78222
38	1.13441	1.48193	1.52863	2.71904	0.44523	0.63794	1.78856	3.74596
39	1.11149	1.45578	1.50068	2.66114	0.43593	0.62461	1.75118	3.71292
40	1.08958	1.43107	1.47428	2.60756	0.42719	0.61209	1.71609	3.68306
41	1.06862	1.40770	1.44932	2.55800	0.41900	0.60036	1.68319	3.65638
42	1.04853	1.38559	1.42571	2.51219	0.41133	0.58937	1.65237	3.63277
43	1.02925	1.36465	1.40336	2.46989	0.40415	0.57908	1.62354	3.61206
44	1.01073	1.34478	1.38217	2.43088	0.39745	0.56948	1.59662	3.59416
45	0.99291	1.32589	1.36206	2.39497	0.39121	0.56053	1.57153	3.57881
46	0.97574	1.30788	1.34293	2.36198	0.38540	0.55221	1.54820	3.56571
47	0.95917	1.29066	1.32467	2.33175	0.38001	0.54449	1.52655	3.55448
48	0.94336	1.27415	1.30719	2.30402	0.37503	0.53735	1.50653	3.54466
49	0.94084	1.27139	1.30413	2.27787	0.37043	0.53077	1.48808	3.54466
50	0.93846	1.26879	1.30125	2.25435	0.36622	0.52473	1.47116	3.54466
51	0.93622	1.26633	1.29854	2.23336	0.36237	0.51922	1.45570	3.54466
52	0.93410	1.26401	1.29597	2.21477	0.35888	0.51422	1.44168	3.54466
53	0.93210	1.26181	1.29354	2.19850	0.35574	0.50971	1.42905	3.54466
54	0.93020	1.25973	1.29124	2.18447	0.35293	0.50569	1.41778	3.54466
55	0.92840	1.25775	1.28906	2.17262	0.35046	0.50214	1.40783	3.54466
56	0.96167	1.31111	1.34838	2.16289	0.34830	0.49906	1.39918	3.66978
57	0.99503	1.36455	1.40780	2.15524	0.34647	0.49643	1.39182	3.79490
58	1.02846	1.41808	1.46731	2.14962	0.34495	0.49425	1.38571	3.92001
59	1.06197	1.47170	1.52692	2.14603	0.34374	0.49252	1.38084	4.04513
60	1.09556	1.52539	1.58661	2.14445	0.34283	0.49122	1.37720	4.17025
61	1.12920	1.57915	1.64638	2.14487	0.34223	0.49035	1.37477	4.29537
62	1.16291	1.63298	1.70623	2.14731	0.34193	0.48992	1.37356	4.42048
63	1.19667	1.68687	1.76615	2.15178	0.34193	0.48992	1.37357	4.54560
64	1.23049	1.74082	1.82613	2.15831	0.34223	0.49035	1.37478	4.67072
65	1.26436	1.79483	1.88617	2.16694	0.34283	0.49122	1.37720	4.79584

Hardin 1996 Time Period 1 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	92.72041	121.42392	136.64442	247.06181	5.33607	6.16977	42.50887	158.65070
4	71.30885	93.43918	105.19736	225.72986	4.91779	5.68614	39.17668	126.52739
5	58.39038	76.33055	85.57959	206.69385	4.54056	5.24997	36.17154	103.34198
6	49.75183	64.81479	72.21037	189.68015	4.19990	4.85608	33.45772	86.23302
7	43.57361	56.56110	62.56120	174.45013	3.89187	4.49993	31.00386	73.35046
8	38.93947	50.37465	55.30473	160.79642	3.61300	4.17750	28.78236	63.46895
9	35.33742	45.57782	49.67320	148.53775	3.36023	3.88523	26.76866	55.75899
10	32.45888	41.75761	45.19131	137.51579	3.13083	3.61999	24.94122	49.64697
11	30.10672	38.64790	41.54932	127.59222	2.92241	3.37901	23.28087	44.72903
12	28.14917	36.06970	38.53706	118.64545	2.73284	3.15981	21.77066	40.71536
13	26.49486	33.89821	36.00734	110.56903	2.56021	2.96021	20.39549	37.39471
14	25.07835	32.04388	33.85411	103.26913	2.40286	2.77828	19.14198	34.61090
15	23.85175	30.44089	31.99930	96.66389	2.25929	2.61227	17.99823	32.24667
16	22.77899	29.03972	30.38440	90.68013	2.12816	2.46066	16.95367	30.21318
17	21.83261	27.80264	28.96455	85.25439	2.00830	2.32207	15.99883	28.44229
18	20.99120	26.70042	27.70517	80.32973	1.89864	2.19528	15.12526	26.88156
19	20.23792	25.71014	26.57913	75.85617	1.79824	2.07919	14.32541	25.49001
20	19.43167	24.84004	25.60329	71.78960	1.70625	1.97283	13.59261	24.23584
21	18.57436	23.83640	24.54756	68.09059	1.62192	1.87532	12.92076	23.09419
22	17.79410	22.91774	23.58511	64.72446	1.54456	1.78588	12.30450	22.04573
23	17.08080	22.07263	22.70309	61.66020	1.47357	1.70380	11.73899	21.07532
24	16.42607	21.29179	21.89114	58.87041	1.40840	1.62845	11.21986	20.17133
25	15.82290	20.56773	21.14070	56.33063	1.34857	1.55927	10.74323	19.32503
26	15.26537	19.89429	20.44470	54.01918	1.29364	1.49575	10.30558	18.52950
27	14.74849	19.26640	19.79735	51.91664	1.24320	1.43744	9.90377	17.77977
28	14.26800	18.67987	19.19370	50.00574	1.19690	1.38391	9.53496	17.07202
29	13.82025	18.13120	18.62971	48.27138	1.15443	1.33480	9.19662	16.40364
30	13.40207	17.61739	18.10194	46.69974	1.11550	1.28978	8.88643	15.77273
31	13.01074	17.13591	17.60744	45.27870	1.07984	1.24855	8.60234	15.17771
32	12.64385	16.68449	17.14363	43.99771	1.04722	1.21084	8.34251	14.61752
33	12.29929	16.26117	16.70833	42.84708	1.01744	1.17640	8.10528	14.09170
34	11.97521	15.86420	16.29958	41.81844	0.99031	1.14503	7.88912	13.59919
35	11.66996	15.49196	15.91563	40.90442	0.96566	1.11652	7.69271	13.13978
36	11.38204	15.14296	15.55490	40.09843	0.94333	1.09071	7.51488	12.71241
37	11.11016	14.81585	15.21599	39.39491	0.92320	1.06744	7.35452	12.31691
38	10.85311	14.50934	14.89756	38.78905	0.90515	1.04656	7.21068	11.95203
39	10.60980	14.22220	14.59835	38.27650	0.88906	1.02797	7.08256	11.61698
40	10.37926	13.95328	14.31722	37.85399	0.87485	1.01154	6.96937	11.31069
41	10.16058	13.70144	14.05304	37.51860	0.86244	0.99719	6.87048	11.03193
42	9.95294	13.46554	13.80467	37.26804	0.85175	0.98483	6.78534	10.77895
43	9.75557	13.24446	13.57108	37.10072	0.84273	0.97440	6.71346	10.55018
44	9.56774	13.03704	13.35116	37.01550	0.83532	0.96583	6.65444	10.34333
45	9.38878	12.84205	13.14384	37.01184	0.82949	0.95908	6.60796	10.15626
46	9.21803	12.65813	12.94796	37.08961	0.82519	0.95412	6.57375	9.98625
47	9.05486	12.48384	12.76228	37.24942	0.82242	0.95091	6.55163	9.82998
48	8.89865	12.31757	12.58560	37.49237	0.82114	0.94944	6.54148	9.68414
49	8.89865	12.31757	12.58560	37.81998	0.82136	0.94969	6.54326	9.68414
50	8.89865	12.31757	12.58560	38.23445	0.82308	0.95168	6.55694	9.68414
51	8.89865	12.31757	12.58560	38.73859	0.82631	0.95541	6.58263	9.68414
52	8.89865	12.31757	12.58560	39.33589	0.83106	0.96090	6.62046	9.68414
53	8.89865	12.31757	12.58560	40.03029	0.83735	0.96818	6.67063	9.68414
54	8.89865	12.31757	12.58560	40.82675	0.84524	0.97729	6.73343	9.68414
55	8.89865	12.31757	12.58560	41.73071	0.85475	0.98829	6.80920	9.68414
56	10.11837	14.33920	14.77096	42.74860	0.86594	1.00123	6.89837	12.01636
57	11.33808	16.36081	16.95630	43.88779	0.87888	1.01619	7.00143	14.34859
58	12.55781	18.38243	19.14162	45.15660	0.89363	1.03325	7.11898	16.68079
59	13.77752	20.40407	21.32700	46.56445	0.91029	1.05251	7.25169	19.01299
60	14.99724	22.42567	23.51233	48.12189	0.92895	1.07409	7.40033	21.34520
61	16.21693	24.44731	25.69768	49.84096	0.94972	1.09810	7.56578	23.67741
62	17.43665	26.46893	27.88304	51.73515	0.97272	1.12469	7.74901	26.00961
63	18.65634	28.49059	30.06839	53.81963	0.99809	1.15403	7.95113	28.34184
64	19.87607	30.51222	32.25375	56.11136	1.02599	1.18629	8.17340	30.67406
65	21.09576	32.53384	34.43913	58.62933	1.05659	1.22167	8.41718	33.00629

Hardin 1996 Time Period 1 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	2.13121	2.55624	2.57529	4.62330	2.72303	3.15332	29.79782	0.91266
4	1.95652	2.34773	2.37553	4.67115	2.60834	3.02051	28.54282	0.87295
5	1.85081	2.22195	2.25586	4.71899	2.50203	2.89740	27.37952	0.83999
6	1.77971	2.13784	2.17641	4.76683	2.40347	2.78326	26.30098	0.81327
7	1.72849	2.07778	2.12005	4.81467	2.31207	2.67742	25.30077	0.79230
8	1.68975	2.03293	2.07823	4.86251	2.22731	2.57926	24.37323	0.77658
9	1.65940	1.99836	2.04615	4.91036	2.14870	2.48824	23.51303	0.76565
10	1.63497	1.97109	2.02095	4.95820	2.07581	2.40383	22.71545	0.75908
11	1.61488	1.94921	2.00077	5.00604	2.00825	2.32559	21.97609	0.75643
12	1.59807	1.93142	1.98440	5.05388	1.94564	2.25309	21.29102	0.75729
13	1.58382	1.91682	1.97096	5.10173	1.88767	2.18596	20.65662	0.76127
14	1.57160	1.90477	1.95983	5.14957	1.83403	2.12384	20.06960	0.76800
15	1.56102	1.89475	1.95055	5.19741	1.78444	2.06641	19.52695	0.77713
16	1.55178	1.88641	1.94277	5.24525	1.73866	2.01340	19.02600	0.78832
17	1.54366	1.87944	1.93622	5.29309	1.69646	1.96453	18.56421	0.80125
18	1.53649	1.87362	1.93068	5.34094	1.65764	1.91957	18.13940	0.81563
19	1.53012	1.86874	1.92599	5.38878	1.62200	1.87831	17.74950	0.83116
20	1.53119	1.86714	1.92402	5.43662	1.58939	1.84055	17.39264	0.84759
21	1.53993	1.87932	1.93617	5.48446	1.55965	1.80611	17.06718	0.86467
22	1.54794	1.89065	1.94741	5.53230	1.53264	1.77483	16.77161	0.88217
23	1.55530	1.90121	1.95784	5.58015	1.50824	1.74657	16.50458	0.89989
24	1.56212	1.91108	1.96755	5.62799	1.48633	1.72120	16.26488	0.91764
25	1.56845	1.92032	1.97661	5.67583	1.46683	1.69861	16.05142	0.93524
26	1.57435	1.92900	1.98509	5.72367	1.44964	1.67871	15.86331	0.95253
27	1.57988	1.93715	1.99305	5.77152	1.43468	1.66139	15.69965	0.96939
28	1.58508	1.94481	2.00052	5.81936	1.42190	1.64659	15.55976	0.98569
29	1.58998	1.95203	2.00756	5.86720	1.41123	1.63423	15.44304	1.00134
30	1.59462	1.95882	2.01421	5.91504	1.40264	1.62428	15.34897	1.01624
31	1.59903	1.96523	2.02049	5.96289	1.39607	1.61668	15.27715	1.03035
32	1.60323	1.97127	2.02644	6.01073	1.39151	1.61140	15.22729	1.04361
33	1.60725	1.97697	2.03210	6.05857	1.38894	1.60842	15.19914	1.05600
34	1.61110	1.98236	2.03749	6.10641	1.38834	1.60773	15.19260	1.06751
35	1.61481	1.98747	2.04263	6.15426	1.38972	1.60932	15.20766	1.07814
36	1.61840	1.99231	2.04757	6.20210	1.39307	1.61321	15.24434	1.08793
37	1.62188	1.99691	2.05232	6.24994	1.39842	1.61940	15.30285	1.09692
38	1.62527	2.00131	2.05691	6.29778	1.40578	1.62792	15.38339	1.10517
39	1.62858	2.00552	2.06138	6.34562	1.41519	1.63882	15.48633	1.11277
40	1.63183	2.00957	2.06574	6.39347	1.42668	1.65213	15.61214	1.11981
41	1.63503	2.01350	2.07003	6.44131	1.44032	1.66791	15.76131	1.12642
42	1.63819	2.01733	2.07428	6.48915	1.45615	1.68624	15.93452	1.13274
43	1.64134	2.02110	2.07852	6.53699	1.47424	1.70720	16.13254	1.13891
44	1.64448	2.02484	2.08277	6.58484	1.49468	1.73087	16.35620	1.14511
45	1.64763	2.02858	2.08707	6.63268	1.51756	1.75736	16.60655	1.15153
46	1.65080	2.03237	2.09146	6.68052	1.54298	1.78680	16.88469	1.15838
47	1.65400	2.03623	2.09596	6.72836	1.57105	1.81930	17.19188	1.16589
48	1.65726	2.04022	2.10061	6.77621	1.60190	1.85503	17.52953	1.17430
49	1.71807	2.12165	2.18649	6.82405	1.63569	1.89416	17.89922	1.21254
50	1.77888	2.20308	2.27238	6.87189	1.67256	1.93685	18.30266	1.25078
51	1.83969	2.28452	2.35827	6.91973	1.71269	1.98332	18.74179	1.28901
52	1.90051	2.36596	2.44416	6.96758	1.75627	2.03380	19.21877	1.32725
53	1.96132	2.44739	2.53005	7.01542	1.80353	2.08852	19.73582	1.36549
54	2.02213	2.52882	2.61593	7.06326	1.85468	2.14776	20.29561	1.40373
55	2.08295	2.61026	2.70182	7.11110	1.91000	2.21182	20.90097	1.44196
56	2.14376	2.69170	2.78771	7.15894	1.96976	2.28102	21.55492	1.48020
57	2.20457	2.77313	2.87360	7.20679	2.03428	2.35574	22.26099	1.51844
58	2.26539	2.85456	2.95949	7.25463	2.10390	2.43636	23.02280	1.55668
59	2.32620	2.93600	3.04537	7.30247	2.17899	2.52332	23.84454	1.59492
60	2.38701	3.01744	3.13126	7.35031	2.25997	2.61709	24.73071	1.63315
61	2.44783	3.09887	3.21715	7.39816	2.34730	2.71821	25.68623	1.67139
62	2.50864	3.18031	3.30304	7.44600	2.44145	2.82725	26.71658	1.70963
63	2.56945	3.26174	3.38892	7.49384	2.54300	2.94484	27.82777	1.74786
64	2.63027	3.34317	3.47481	7.54168	2.65253	3.07168	29.02640	1.78611
65	2.69108	3.42461	3.56070	7.58953	2.77071	3.20854	30.31961	1.82434

Hardin 1996 Time Period 2 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	MDGV	LDDV	LDDT	HDDV	MC
3	12.98426	15.48520	16.74461	29.49667	1.62326	2.32586	6.52089	18.08282
4	9.20052	11.10460	11.96106	23.01006	1.54113	2.20818	6.19097	15.57079
5	7.16046	8.70376	9.33016	19.39043	1.46445	2.09830	5.88291	13.71023
6	5.89635	7.19822	7.67611	16.97803	1.39280	1.99565	5.59510	12.30589
7	5.04069	6.17098	6.54600	15.19154	1.32583	1.89968	5.32606	11.22756
8	4.53319	5.52914	5.83846	14.00463	1.26319	1.80993	5.07441	10.38655
9	4.14248	5.03583	5.29518	12.99279	1.20456	1.72593	4.83892	9.72119
10	3.82277	4.63693	4.85683	12.09726	1.14967	1.64728	4.61841	9.18778
11	3.55475	4.30691	4.49521	11.29899	1.09825	1.57360	4.41183	8.75484
12	3.32549	4.02854	4.19121	10.58352	1.05005	1.50454	4.21821	8.39925
13	3.12604	3.78980	3.93145	9.93944	1.00485	1.43977	4.03663	8.10386
14	2.94998	3.58205	3.70630	9.35746	0.96244	1.37901	3.86627	7.85568
15	2.79260	3.39892	3.50866	8.82994	0.92264	1.32198	3.70636	7.64478
16	2.65038	3.23560	3.33316	8.35041	0.88525	1.26841	3.55619	7.46352
17	2.52062	3.08846	3.17575	7.91341	0.85014	1.21809	3.41511	7.30589
18	2.40121	2.95466	3.03324	7.51422	0.81713	1.17080	3.28252	7.16719
19	2.29051	2.83196	2.90315	7.14877	0.78609	1.12633	3.15785	7.04371
20	2.18980	2.72861	2.79336	6.82166	0.75690	1.08451	3.04059	6.93249
21	2.10811	2.63189	2.69182	6.53388	0.72944	1.04516	2.93026	6.83121
22	2.03327	2.54319	2.59895	6.27045	0.70359	1.00812	2.82642	6.73799
23	1.96438	2.46144	2.51357	6.02898	0.67925	0.97326	2.72866	6.65142
24	1.90069	2.38577	2.43473	5.80733	0.65634	0.94042	2.63660	6.57035
25	1.84158	2.31546	2.36163	5.60362	0.63475	0.90949	2.54989	6.49393
26	1.78654	2.24994	2.29360	5.41618	0.61442	0.88036	2.46820	6.42152
27	1.73510	2.18870	2.23012	5.24350	0.59526	0.85290	2.39124	6.35264
28	1.68689	2.13135	2.17071	5.08425	0.57720	0.82703	2.31871	6.28700
29	1.64160	2.07753	2.11500	4.93725	0.56019	0.80266	2.25036	6.22437
30	1.59892	2.02697	2.06265	4.80141	0.54416	0.77968	2.18595	6.16462
31	1.55863	1.97940	2.01341	4.67579	0.52905	0.75803	2.12525	6.10774
32	1.52050	1.93461	1.96701	4.55953	0.51481	0.73763	2.06806	6.05369
33	1.48436	1.89242	1.92326	4.45185	0.50140	0.71841	2.01418	6.00255
34	1.45002	1.85264	1.88198	4.35205	0.48876	0.70031	1.96342	5.95432
35	1.41735	1.81512	1.84300	4.25950	0.47687	0.68327	1.91564	5.90911
36	1.38622	1.77973	1.80616	4.17365	0.46567	0.66722	1.87066	5.86697
37	1.35650	1.74632	1.77135	4.09398	0.45514	0.65213	1.82834	5.82793
38	1.32810	1.71479	1.73843	4.02004	0.44523	0.63794	1.78856	5.79205
39	1.30091	1.68500	1.70729	3.95139	0.43593	0.62461	1.75118	5.75935
40	1.27484	1.65686	1.67782	3.88768	0.42719	0.61209	1.71609	5.72980
41	1.24982	1.63025	1.64991	3.82856	0.41900	0.60036	1.68319	5.70341
42	1.22578	1.60508	1.62346	3.77372	0.41133	0.58937	1.65237	5.68004
43	1.20264	1.58123	1.59837	3.72289	0.40415	0.57908	1.62354	5.65955
44	1.18034	1.55861	1.57455	3.67581	0.39745	0.56948	1.59662	5.64185
45	1.15882	1.53710	1.55189	3.63227	0.39121	0.56053	1.57153	5.62665
46	1.13803	1.51660	1.53029	3.59205	0.38540	0.55221	1.54820	5.61369
47	1.11791	1.49698	1.50964	3.55498	0.38001	0.54449	1.52655	5.60258
48	1.09871	1.47810	1.48978	3.52063	0.37503	0.53735	1.50653	5.59286
49	1.09417	1.47309	1.48421	3.48694	0.37043	0.53077	1.48808	5.59286
50	1.08989	1.46837	1.47896	3.45644	0.36622	0.52473	1.47116	5.59286
51	1.08586	1.46393	1.47402	3.42897	0.36237	0.51922	1.45570	5.59286
52	1.08205	1.45973	1.46935	3.40440	0.35888	0.51422	1.44168	5.59286
53	1.07845	1.45576	1.46493	3.38260	0.35574	0.50971	1.42905	5.59286
54	1.07505	1.45201	1.46076	3.36347	0.35293	0.50569	1.41778	5.59286
55	1.07182	1.44845	1.45680	3.34694	0.35046	0.50214	1.40783	5.59286
56	1.10529	1.50434	1.51667	3.33291	0.34830	0.49906	1.39918	5.71667
57	1.13891	1.56040	1.57672	3.32133	0.34647	0.49643	1.39182	5.84047
58	1.17268	1.61662	1.63695	3.31216	0.34495	0.49425	1.38571	5.96428
59	1.20658	1.67299	1.69735	3.30534	0.34374	0.49252	1.38084	6.08808
60	1.24061	1.72950	1.75791	3.30087	0.34283	0.49122	1.37720	6.21189
61	1.27476	1.78614	1.81861	3.29873	0.34223	0.49035	1.37477	6.33569
62	1.30902	1.84290	1.87945	3.29893	0.34193	0.48992	1.37356	6.45950
63	1.34338	1.89978	1.94041	3.30147	0.34193	0.48992	1.37357	6.58330
64	1.37784	1.95677	2.00150	3.30637	0.34223	0.49035	1.37478	6.70711
65	1.41240	2.01385	2.06269	3.31368	0.34283	0.49122	1.37720	6.83091

Hardin 1996 Time Period 2 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	99.28105	133.96745	149.36284	315.86035	5.33607	6.16977	42.50887	192.74257
4	76.25853	103.07964	114.90623	288.58813	4.91779	5.68614	39.17668	153.71643
5	62.34926	84.10207	93.34850	264.25171	4.54056	5.24997	36.17154	125.54875
6	53.04158	71.29758	78.63574	242.50067	4.19990	4.85608	33.45772	104.76335
7	46.38303	62.11346	68.01096	223.02960	3.89187	4.49993	31.00386	89.11252
8	41.38873	55.23187	60.02075	205.57364	3.61300	4.17750	28.78236	77.10760
9	37.50754	49.90121	53.82187	189.90128	3.36023	3.88523	26.76866	67.74086
10	34.40689	45.66154	48.89104	175.81001	3.13083	3.61999	24.94122	60.31546
11	31.87411	42.21555	44.88667	163.12305	2.92241	3.37901	23.28087	54.34073
12	29.76701	39.36269	41.57686	151.68486	2.73284	3.15981	21.77066	49.46458
13	27.98689	36.96300	38.79892	141.35937	2.56021	2.96021	20.39549	45.43037
14	26.46307	34.91594	36.43571	132.02669	2.40286	2.77828	19.14198	42.04832
15	25.14378	33.14743	34.40092	123.58203	2.25929	2.61227	17.99823	39.17606
16	23.99008	31.60185	32.62988	115.93198	2.12816	2.46066	16.95367	36.70560
17	22.97224	30.23679	31.07304	108.99532	2.00830	2.32207	15.99883	34.55417
18	22.06720	29.01938	29.69221	102.69931	1.89864	2.19528	15.12526	32.65802
19	21.25673	27.92400	28.45743	96.97995	1.79824	2.07919	14.32541	30.96744
20	20.40004	26.97690	27.40549	91.78096	1.70625	1.97283	13.59261	29.44379
21	19.49857	25.89699	26.27634	87.05191	1.62192	1.87532	12.92076	28.05681
22	18.67780	24.90601	25.24644	82.74840	1.54456	1.78588	12.30450	26.78304
23	17.92709	23.99185	24.30209	78.83084	1.47357	1.70380	11.73899	25.60411
24	17.23769	23.14482	23.43221	75.26418	1.40840	1.62845	11.21986	24.50589
25	16.60225	22.35719	22.62770	72.01712	1.34857	1.55927	10.74323	23.47772
26	16.01460	21.62270	21.88107	69.06200	1.29364	1.49575	10.30558	22.51123
27	15.46957	20.93626	21.18622	66.37398	1.24320	1.43744	9.90377	21.60040
28	14.96270	20.29375	20.53795	63.93094	1.19690	1.38391	9.53496	20.74055
29	14.49021	19.69174	19.93202	61.71361	1.15443	1.33480	9.19662	19.92854
30	14.04884	19.12738	19.36482	59.70432	1.11550	1.28978	8.88643	19.16203
31	13.63575	18.59822	18.83330	57.88757	1.07984	1.24855	8.60234	18.43916
32	13.24845	18.10211	18.33476	56.24982	1.04722	1.21084	8.34251	17.75861
33	12.88478	17.63716	17.86696	54.77881	1.01744	1.17640	8.10528	17.11980
34	12.54280	17.20166	17.42783	53.46371	0.99031	1.14503	7.88912	16.52145
35	12.22080	16.79410	17.01559	52.29517	0.96566	1.11652	7.69271	15.96335
36	11.91724	16.41292	16.62856	51.26472	0.94333	1.09071	7.51488	15.44414
37	11.63075	16.05676	16.26527	50.36530	0.92320	1.06744	7.35452	14.96365
38	11.36009	15.72430	15.92436	49.59070	0.90515	1.04656	7.21068	14.52037
39	11.10411	15.41424	15.60442	48.93547	0.88906	1.02797	7.08256	14.11332
40	10.86178	15.12530	15.30425	48.39528	0.87485	1.01154	6.96937	13.74121
41	10.63215	14.85625	15.02266	47.96648	0.86244	0.99719	6.87048	13.40255
42	10.41434	14.60577	14.75837	47.64615	0.85175	0.98483	6.78534	13.09520
43	10.20753	14.37255	14.51029	47.43225	0.84273	0.97440	6.71346	12.81727
44	10.01093	14.15520	14.27715	47.32329	0.83532	0.96583	6.65444	12.56597
45	9.82380	13.95218	14.05779	47.31860	0.82949	0.95908	6.60796	12.33870
46	9.64541	13.76176	13.85087	47.41803	0.82519	0.95412	6.57375	12.13216
47	9.47506	13.58203	13.65499	47.62238	0.82242	0.95091	6.55163	11.94231
48	9.31202	13.41086	13.46875	47.93294	0.82114	0.94944	6.54148	11.76513
49	9.31202	13.41086	13.46875	48.35178	0.82136	0.94969	6.54326	11.76513
50	9.31202	13.41086	13.46875	48.88167	0.82308	0.95168	6.55694	11.76513
51	9.31202	13.41086	13.46875	49.52623	0.82631	0.95541	6.58263	11.76513
52	9.31202	13.41086	13.46875	50.28983	0.83106	0.96090	6.62046	11.76513
53	9.31202	13.41086	13.46875	51.17761	0.83735	0.96818	6.67063	11.76513
54	9.31202	13.41086	13.46875	52.19586	0.84524	0.97729	6.73343	11.76513
55	9.31202	13.41086	13.46875	53.35153	0.85475	0.98829	6.80920	11.76513
56	10.63011	15.69776	15.86887	54.65291	0.86594	1.00123	6.89837	14.59851
57	11.94820	17.98462	18.26895	56.10934	0.87888	1.01619	7.00143	17.43187
58	13.26629	20.27153	20.66905	57.73143	0.89363	1.03325	7.11899	20.26524
59	14.58438	22.55846	23.06918	59.53134	0.91029	1.05251	7.25169	23.09862
60	15.90246	24.84532	25.46928	61.52249	0.92895	1.07409	7.40033	25.93199
61	17.22054	27.13225	27.86938	63.72026	0.94972	1.09810	7.56578	28.76535
62	18.53862	29.41914	30.26952	66.14195	0.97272	1.12469	7.74901	31.59871
63	19.85670	31.70607	32.66962	68.80685	0.99809	1.15403	7.95113	34.43216
64	21.17479	33.99298	35.06973	71.73679	1.02599	1.18629	8.17340	37.26553
65	22.49286	36.27986	37.46988	74.95595	1.05659	1.22167	8.41718	40.09889

Hardin 1996 Time Period 2 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LODT	HDDV	MC
3	2.13139	2.54564	2.54345	4.41039	2.72303	3.15332	29.79782	0.82775
4	1.95483	2.33627	2.34264	4.45603	2.60834	3.02051	28.54282	0.79173
5	1.84820	2.21009	2.22232	4.50167	2.50203	2.89740	27.37952	0.76184
6	1.77664	2.12578	2.14240	4.54731	2.40347	2.78326	26.30098	0.73761
7	1.72519	2.06562	2.08566	4.59294	2.31207	2.67742	25.30077	0.71858
8	1.68637	2.02069	2.04347	4.63858	2.22731	2.57926	24.37323	0.70432
9	1.65602	1.98605	2.01104	4.68422	2.14870	2.48824	23.51303	0.69442
10	1.63163	1.95870	1.98549	4.72986	2.07581	2.40383	22.71545	0.68845
11	1.61161	1.93671	1.96496	4.77550	2.00825	2.32559	21.97609	0.68605
12	1.59489	1.91881	1.94822	4.82114	1.94564	2.25309	21.29102	0.68683
13	1.58074	1.90407	1.93440	4.86678	1.88767	2.18596	20.65662	0.69044
14	1.56861	1.89186	1.92288	4.91242	1.83403	2.12384	20.06960	0.69655
15	1.55811	1.88167	1.91321	4.95806	1.78444	2.06641	19.52695	0.70483
16	1.54896	1.87313	1.90502	5.00370	1.73866	2.01340	19.02600	0.71498
17	1.54092	1.86595	1.89806	5.04933	1.69646	1.96453	18.56421	0.72671
18	1.53381	1.85990	1.89212	5.09497	1.65764	1.91957	18.13940	0.73974
19	1.52750	1.85479	1.88701	5.14061	1.62200	1.87831	17.74950	0.75383
20	1.52872	1.85282	1.88450	5.18625	1.58939	1.84055	17.39264	0.76873
21	1.53770	1.86469	1.89618	5.23189	1.55965	1.80611	17.06718	0.78422
22	1.54591	1.87571	1.90695	5.27752	1.53264	1.77483	16.77161	0.80010
23	1.55346	1.88596	1.91693	5.32317	1.50824	1.74657	16.50458	0.81617
24	1.56043	1.89553	1.92620	5.36880	1.48633	1.72120	16.26488	0.83226
25	1.56689	1.90448	1.93483	5.41444	1.46683	1.69861	16.05142	0.84822
26	1.57291	1.91287	1.94289	5.46008	1.44964	1.67871	15.86331	0.86391
27	1.57853	1.92073	1.95045	5.50572	1.43468	1.66139	15.69965	0.87920
28	1.58380	1.92812	1.95753	5.55136	1.42190	1.64659	15.55976	0.89398
29	1.58875	1.93506	1.96419	5.59700	1.41123	1.63423	15.44304	0.90817
30	1.59343	1.94159	1.97047	5.64264	1.40264	1.62428	15.34897	0.92169
31	1.59785	1.94774	1.97639	5.68828	1.39607	1.61668	15.27715	0.93449
32	1.60205	1.95353	1.98200	5.73392	1.39151	1.61140	15.22729	0.94652
33	1.60605	1.95899	1.98731	5.77956	1.38894	1.60842	15.19914	0.95775
34	1.60987	1.96415	1.99237	5.82519	1.38834	1.60773	15.19260	0.96819
35	1.61353	1.96902	1.99718	5.87084	1.38972	1.60932	15.20766	0.97783
36	1.61705	1.97363	2.00179	5.91647	1.39307	1.61321	15.24434	0.98671
37	1.62044	1.97801	2.00622	5.96211	1.39842	1.61940	15.30285	0.99486
38	1.62373	1.98218	2.01048	6.00775	1.40578	1.62792	15.38339	1.00234
39	1.62692	1.98617	2.01462	6.05339	1.41519	1.63882	15.48633	1.00924
40	1.63002	1.99000	2.01864	6.09903	1.42668	1.65213	15.61214	1.01563
41	1.63307	1.99369	2.02259	6.14467	1.44032	1.66791	15.76131	1.02162
42	1.63605	1.99729	2.02647	6.19031	1.45615	1.68624	15.93452	1.02735
43	1.63900	2.00080	2.03032	6.23594	1.47424	1.70720	16.13254	1.03294
44	1.64192	2.00428	2.03417	6.28159	1.49468	1.73087	16.35620	1.03857
45	1.64482	2.00775	2.03804	6.32722	1.51756	1.75736	16.60655	1.04439
46	1.64772	2.01123	2.04196	6.37286	1.54298	1.78680	16.88469	1.05060
47	1.65063	2.01477	2.04596	6.41850	1.57105	1.81930	17.19188	1.05741
48	1.65357	2.01841	2.05007	6.46414	1.60190	1.85503	17.52953	1.06504
49	1.71392	2.09884	2.13355	6.50978	1.63569	1.89416	17.89922	1.09972
50	1.77426	2.17928	2.21702	6.55542	1.67256	1.93685	18.30266	1.13440
51	1.83461	2.25971	2.30049	6.60106	1.71269	1.98332	18.74179	1.16908
52	1.89496	2.34015	2.38397	6.64670	1.75627	2.03380	19.21877	1.20376
53	1.95531	2.42058	2.46744	6.69234	1.80353	2.08852	19.73582	1.23844
54	2.01566	2.50102	2.55091	6.73797	1.85468	2.14776	20.29561	1.27312
55	2.07601	2.58145	2.63439	6.78362	1.91000	2.21182	20.90097	1.30780
56	2.13636	2.66189	2.71786	6.82925	1.96976	2.28102	21.55492	1.34248
57	2.19671	2.74232	2.80134	6.87489	2.03428	2.35574	22.26099	1.37716
58	2.25706	2.82275	2.88481	6.92053	2.10390	2.43636	23.02280	1.41184
59	2.31741	2.90319	2.96828	6.96618	2.17899	2.52332	23.84454	1.44652
60	2.37775	2.98363	3.05176	7.01181	2.25997	2.61709	24.73071	1.48121
61	2.43810	3.06406	3.13523	7.05745	2.34730	2.71821	25.68623	1.51589
62	2.49845	3.14450	3.21870	7.10309	2.44145	2.82725	26.71658	1.55056
63	2.55880	3.22493	3.30218	7.14873	2.54300	2.94484	27.82777	1.58525
64	2.61915	3.30536	3.38565	7.19437	2.65253	3.07168	29.02640	1.61992
65	2.67950	3.38580	3.46912	7.24001	2.77071	3.20854	30.31961	1.65461

Hardin 1996 Time Period 3 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	13.64069	16.06403	17.35461	31.14575	1.62326	2.32586	6.52089	18.31435
4	9.61221	11.45095	12.31696	24.06297	1.54113	2.20818	6.19097	15.80409
5	7.45195	8.93963	9.56709	20.15707	1.46445	2.09830	5.88291	13.94484
6	6.11882	7.37255	7.84767	17.58229	1.39280	1.99565	5.59510	12.54149
7	5.21932	6.30731	6.67770	15.69305	1.32583	1.89968	5.32606	11.46392
8	4.69351	5.64945	5.95426	14.46088	1.26319	1.80993	5.07441	10.62350
9	4.28889	5.14491	5.39996	13.41475	1.20456	1.72593	4.83892	9.95860
10	3.95715	4.73720	4.95296	12.49026	1.14967	1.64728	4.61841	9.42558
11	3.67848	4.40015	4.58441	11.66707	1.09825	1.57360	4.41183	8.99293
12	3.43962	4.11610	4.27478	10.92981	1.05005	1.50454	4.21821	8.63760
13	3.23135	3.87269	4.01038	10.26644	1.00485	1.43977	4.03663	8.34242
14	3.04710	3.66106	3.78138	9.66721	0.96244	1.37901	3.86627	8.09441
15	2.88203	3.47468	3.58050	9.12410	0.92264	1.32198	3.70636	7.88366
16	2.73253	3.30865	3.40229	8.63040	0.88525	1.26841	3.55619	7.70252
17	2.59581	3.15920	3.24257	8.18042	0.85014	1.21809	3.41511	7.54501
18	2.46973	3.02344	3.09811	7.76927	0.81713	1.17080	3.28252	7.40641
19	2.35258	2.89907	2.96636	7.39274	0.78609	1.12633	3.15785	7.28302
20	2.24724	2.79395	2.85485	7.05640	0.75690	1.08451	3.04059	7.17187
21	2.16348	2.69490	2.75105	6.76164	0.72944	1.04516	2.93026	7.07066
22	2.08672	2.60404	2.65610	6.49182	0.70359	1.00812	2.82642	6.97751
23	2.01603	2.52029	2.56882	6.24449	0.67925	0.97326	2.72866	6.89100
24	1.95067	2.44275	2.48820	6.01744	0.65634	0.94042	2.63660	6.80998
25	1.88998	2.37070	2.41344	5.80875	0.63475	0.90949	2.54989	6.73362
26	1.83344	2.30353	2.34387	5.61669	0.61442	0.88036	2.46820	6.66126
27	1.78058	2.24075	2.27893	5.43974	0.59526	0.85290	2.39124	6.59243
28	1.73102	2.18193	2.21816	5.27651	0.57720	0.82703	2.31871	6.52683
29	1.68444	2.12673	2.16117	5.12580	0.56019	0.80266	2.25036	6.46424
30	1.64053	2.07485	2.10761	4.98651	0.54416	0.77968	2.18595	6.40454
31	1.59906	2.02604	2.05721	4.85765	0.52905	0.75803	2.12525	6.34770
32	1.55980	1.98007	2.00972	4.73835	0.51481	0.73763	2.06806	6.29369
33	1.52256	1.93674	1.96493	4.62782	0.50140	0.71841	2.01418	6.24258
34	1.48717	1.89590	1.92266	4.52535	0.48876	0.70031	1.96342	6.19439
35	1.45349	1.85736	1.88272	4.43029	0.47687	0.68327	1.91564	6.14921
36	1.42137	1.82099	1.84498	4.34206	0.46567	0.66722	1.87066	6.10710
37	1.39070	1.78665	1.80929	4.26015	0.45514	0.65213	1.82834	6.06809
38	1.36137	1.75423	1.77552	4.18408	0.44523	0.63794	1.78856	6.03224
39	1.33328	1.72360	1.74357	4.11343	0.43593	0.62461	1.75118	5.99956
40	1.30633	1.69464	1.71331	4.04781	0.42719	0.61209	1.71609	5.97003
41	1.28046	1.66726	1.68465	3.98689	0.41900	0.60036	1.68319	5.94365
42	1.25558	1.64134	1.65747	3.93033	0.41133	0.58937	1.65237	5.92031
43	1.23163	1.61678	1.63167	3.87787	0.40415	0.57908	1.62354	5.89983
44	1.20853	1.59347	1.60716	3.82925	0.39745	0.56948	1.59662	5.88213
45	1.18624	1.57130	1.58383	3.78423	0.39121	0.56053	1.57153	5.86695
46	1.16468	1.55015	1.56158	3.74261	0.38540	0.55221	1.54820	5.85400
47	1.14381	1.52991	1.54030	3.70420	0.38001	0.54449	1.52655	5.84289
48	1.12389	1.51042	1.51982	3.66852	0.37503	0.53735	1.50653	5.83318
49	1.11887	1.50489	1.51365	3.63324	0.37043	0.53077	1.48808	5.83318
50	1.11415	1.49967	1.50785	3.60125	0.36622	0.52473	1.47116	5.83318
51	1.10970	1.49476	1.50238	3.57240	0.36237	0.51922	1.45570	5.83318
52	1.10550	1.49012	1.49721	3.54653	0.35888	0.51422	1.44168	5.83318
53	1.10152	1.48573	1.49233	3.52353	0.35574	0.50971	1.42905	5.83318
54	1.09776	1.48158	1.48771	3.50329	0.35293	0.50569	1.41778	5.83318
55	1.09420	1.47765	1.48334	3.48571	0.35046	0.50214	1.40783	5.83318
56	1.12757	1.53378	1.54316	3.47072	0.34830	0.49906	1.39918	5.95690
57	1.16111	1.59009	1.60319	3.45824	0.34647	0.49643	1.39182	6.08062
58	1.19481	1.64658	1.66342	3.44823	0.34495	0.49425	1.38571	6.20434
59	1.22866	1.70323	1.72384	3.44066	0.34374	0.49252	1.38084	6.32806
60	1.26266	1.76004	1.78443	3.43548	0.34283	0.49122	1.37720	6.45177
61	1.29678	1.81699	1.84517	3.43270	0.34223	0.49035	1.37477	6.57549
62	1.33103	1.87408	1.90607	3.43230	0.34193	0.48992	1.37356	6.69921
63	1.36539	1.93130	1.96712	3.43430	0.34193	0.48992	1.37357	6.82293
64	1.39985	1.98863	2.02829	3.43872	0.34223	0.49035	1.37478	6.94665
65	1.43442	2.04608	2.08959	3.44560	0.34283	0.49122	1.37720	7.07037

Hardin 1996 Time Period 3 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	100.30173	135.94427	151.33046	324.80054	5.33607	6.16977	42.50887	197.52565
4	77.02823	104.59715	116.40627	296.75684	4.91779	5.68614	39.17668	157.53102
5	62.96489	85.32495	94.54865	271.73120	4.54056	5.24997	36.17154	128.66441
6	53.55328	72.31767	79.62865	249.36459	4.19990	4.85608	33.45772	107.36316
7	46.82018	62.98727	68.85352	229.34251	3.89187	4.49993	31.00386	91.32393
8	41.76997	55.99637	60.75020	211.39250	3.61300	4.17750	28.78236	79.02109
9	37.84543	50.58177	54.46378	195.27652	3.36023	3.88523	26.76866	69.42191
10	34.71030	46.27609	49.46361	180.78639	3.13083	3.61999	24.94122	61.81223
11	32.14946	42.77711	45.40323	167.74028	2.92241	3.37901	23.28087	55.68925
12	30.01913	39.88100	42.04738	155.97835	2.73284	3.15981	21.77066	50.69209
13	28.21945	37.44531	39.23096	145.36064	2.56021	2.96021	20.39549	46.55780
14	26.67894	35.36783	36.83519	135.76375	2.40286	2.77828	19.14198	43.09177
15	25.34523	33.57320	34.77245	127.08011	2.25929	2.61227	17.99823	40.14821
16	24.17892	32.00481	32.97716	119.21349	2.12816	2.46066	16.95367	37.61647
17	23.14998	30.61951	31.39903	112.08049	2.00830	2.32207	15.99883	35.41170
18	22.23502	29.38391	29.99934	105.60620	1.89864	2.19528	15.12526	33.46848
19	21.41566	28.27193	28.74770	99.72498	1.79824	2.07919	14.32541	31.73592
20	20.55113	27.31282	27.68414	94.37888	1.70625	1.97283	13.59261	30.17445
21	19.64281	26.22107	26.54384	89.51596	1.62192	1.87532	12.92076	28.75308
22	18.81573	25.21884	25.50371	85.09059	1.54456	1.78588	12.30450	27.44766
23	18.05920	24.29398	24.54991	81.06216	1.47357	1.70380	11.73899	26.23947
24	17.36443	23.43666	23.67126	77.39456	1.40840	1.62845	11.21986	25.11400
25	16.72397	22.63918	22.85860	74.05560	1.34857	1.55927	10.74323	24.06032
26	16.13165	21.89520	22.10432	71.01682	1.29364	1.49575	10.30558	23.06989
27	15.58225	21.19969	21.40230	68.25273	1.24320	1.43744	9.90377	22.13643
28	15.07128	20.54852	20.74730	65.74051	1.19690	1.38391	9.53496	21.25523
29	14.59496	19.93823	20.13504	63.46040	1.15443	1.33480	9.19662	20.42310
30	14.14999	19.36604	19.56192	61.39426	1.11550	1.28978	8.88643	19.63756
31	13.73352	18.82948	19.02483	59.52614	1.07984	1.24855	8.60234	18.89674
32	13.34306	18.32646	18.52106	57.84200	1.04722	1.21084	8.34251	18.19930
33	12.97643	17.85506	18.04834	56.32933	1.01744	1.17640	8.10528	17.54465
34	12.63167	17.41360	17.60464	54.97705	0.99031	1.14503	7.88912	16.93146
35	12.30707	17.00055	17.18814	53.77534	0.96566	1.11652	7.69271	16.35948
36	12.00109	16.61438	16.79713	52.71577	0.94333	1.09071	7.51488	15.82740
37	11.71233	16.25371	16.43018	51.79092	0.92320	1.06744	7.35452	15.33498
38	11.43955	15.91723	16.08583	50.99438	0.90515	1.04656	7.21068	14.88070
39	11.18160	15.60361	15.76275	50.32060	0.88906	1.02797	7.08256	14.46355
40	10.93744	15.31156	15.45968	49.76511	0.87485	1.01154	6.96937	14.08221
41	10.70611	15.03982	15.17542	49.32420	0.86244	0.99719	6.87048	13.73514
42	10.48671	14.78707	14.90870	48.99484	0.85175	0.98483	6.78534	13.42017
43	10.27843	14.55195	14.65838	48.77486	0.84273	0.97440	6.71346	13.13535
44	10.08046	14.33304	14.42320	48.66280	0.83532	0.96583	6.65444	12.87781
45	9.89205	14.12876	14.20197	48.65797	0.82949	0.95908	6.60796	12.64490
46	9.71247	13.93730	13.99332	48.76021	0.82519	0.95412	6.57375	12.43323
47	9.54099	13.75670	13.79585	48.97034	0.82242	0.95091	6.55163	12.23866
48	9.37688	13.58475	13.60811	49.28969	0.82114	0.94944	6.54148	12.05709
49	9.37688	13.58475	13.60811	49.72040	0.82136	0.94969	6.54326	12.05709
50	9.37688	13.58475	13.60811	50.26530	0.82308	0.95168	6.55694	12.05709
51	9.37688	13.58475	13.60811	50.92809	0.82631	0.95541	6.58263	12.05709
52	9.37688	13.58475	13.60811	51.71333	0.83106	0.96090	6.62046	12.05709
53	9.37688	13.58475	13.60811	52.62622	0.83735	0.96818	6.67063	12.05709
54	9.37688	13.58475	13.60811	53.67331	0.84524	0.97729	6.73343	12.05709
55	9.37688	13.58475	13.60811	54.86166	0.85475	0.98829	6.80920	12.05709
56	10.71036	15.91368	16.04190	56.19991	0.86594	1.00123	6.89837	14.96079
57	12.04385	18.24257	18.47566	57.69753	0.87888	1.01619	7.00143	17.86447
58	13.37735	20.57150	20.90942	59.36554	0.89363	1.03325	7.11898	20.76814
59	14.71084	22.90045	23.34323	61.21640	0.91029	1.05251	7.25169	23.67186
60	16.04430	25.22935	25.77701	63.26392	0.92895	1.07409	7.40033	26.57552
61	17.37779	27.55832	28.21078	65.52388	0.94972	1.09810	7.56578	29.47922
62	18.71127	29.88725	30.64459	68.01410	0.97272	1.12469	7.74901	32.38287
63	20.04474	32.21620	33.07835	70.75443	0.99809	1.15403	7.95113	35.28662
64	21.37825	34.54514	35.51216	73.76733	1.02599	1.18629	8.17340	38.19029
65	22.71170	36.87405	37.94597	77.07761	1.05659	1.22167	8.41718	41.09398

Hardin 1996 Time Period 3 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	2.13179	2.54502	2.54080	4.39039	2.72303	3.15332	29.79782	0.81913
4	1.95502	2.33554	2.33985	4.43582	2.60834	3.02051	28.54282	0.78349
5	1.84829	2.20930	2.21945	4.48125	2.50203	2.89740	27.37952	0.75391
6	1.77667	2.12496	2.13947	4.52668	2.40347	2.78326	26.30098	0.72993
7	1.72519	2.06477	2.08267	4.57211	2.31207	2.67742	25.30077	0.71110
8	1.68636	2.01983	2.04045	4.61755	2.22731	2.57926	24.37323	0.69700
9	1.65600	1.98517	2.00798	4.66298	2.14870	2.48824	23.51303	0.68719
10	1.63161	1.95781	1.98239	4.70841	2.07581	2.40383	22.71545	0.68129
11	1.61159	1.93581	1.96182	4.75384	2.00825	2.32559	21.97609	0.67891
12	1.59488	1.91788	1.94504	4.79928	1.94564	2.25309	21.29102	0.67968
13	1.58073	1.90313	1.93118	4.84471	1.88767	2.18596	20.65662	0.68326
14	1.56861	1.89090	1.91962	4.89014	1.83403	2.12384	20.06960	0.68930
15	1.55812	1.88069	1.90990	4.93557	1.78444	2.06641	19.52695	0.69750
16	1.54897	1.87213	1.90168	4.98100	1.73866	2.01340	19.02600	0.70754
17	1.54093	1.86492	1.89468	5.02643	1.69646	1.96453	18.56421	0.71914
18	1.53383	1.85885	1.88869	5.07187	1.65764	1.91957	18.13940	0.73204
19	1.52752	1.85372	1.88355	5.11730	1.62200	1.87831	17.74950	0.74598
20	1.52876	1.85170	1.88098	5.16273	1.58939	1.84055	17.39264	0.76073
21	1.53776	1.86355	1.89261	5.20816	1.55965	1.80611	17.06718	0.77606
22	1.54599	1.87454	1.90334	5.25359	1.53264	1.77483	16.77161	0.79177
23	1.55356	1.88476	1.91328	5.29902	1.50824	1.74657	16.50458	0.80768
24	1.56055	1.89430	1.92250	5.34445	1.48633	1.72120	16.26488	0.82360
25	1.56702	1.90322	1.93110	5.38989	1.46683	1.69861	16.05142	0.83940
26	1.57305	1.91158	1.93912	5.43532	1.44964	1.67871	15.86331	0.85492
27	1.57868	1.91942	1.94664	5.48075	1.43468	1.66139	15.69965	0.87005
28	1.58395	1.92678	1.95369	5.52619	1.42190	1.64659	15.55976	0.88468
29	1.58891	1.93369	1.96031	5.57162	1.41123	1.63423	15.44304	0.89872
30	1.59359	1.94020	1.96655	5.61705	1.40264	1.62428	15.34897	0.91210
31	1.59802	1.94632	1.97244	5.66248	1.39607	1.61668	15.27715	0.92477
32	1.60222	1.95209	1.97802	5.70791	1.39151	1.61140	15.22729	0.93667
33	1.60622	1.95753	1.98330	5.75335	1.38894	1.60842	15.19914	0.94779
34	1.61004	1.96266	1.98832	5.79878	1.38834	1.60773	15.19260	0.95811
35	1.61369	1.96751	1.99311	5.84421	1.38972	1.60932	15.20766	0.96766
36	1.61720	1.97210	1.99769	5.88964	1.39307	1.61321	15.24434	0.97644
37	1.62059	1.97646	2.00208	5.93507	1.39842	1.61940	15.30285	0.98451
38	1.62386	1.98061	2.00632	5.98051	1.40578	1.62792	15.38339	0.99192
39	1.62704	1.98457	2.01042	6.02594	1.41519	1.63882	15.48633	0.99874
40	1.63014	1.98838	2.01441	6.07137	1.42668	1.65213	15.61214	1.00506
41	1.63316	1.99205	2.01832	6.11680	1.44032	1.66791	15.76131	1.01099
42	1.63613	1.99562	2.02217	6.16224	1.45615	1.68624	15.93452	1.01666
43	1.63906	1.99912	2.02599	6.20766	1.47424	1.70720	16.13254	1.02219
44	1.64196	2.00257	2.02980	6.25310	1.49468	1.73087	16.35620	1.02776
45	1.64484	2.00601	2.03363	6.29853	1.51756	1.75736	16.60655	1.03352
46	1.64772	2.00946	2.03751	6.34396	1.54298	1.78680	16.88469	1.03967
47	1.65060	2.01298	2.04146	6.38939	1.57105	1.81930	17.19188	1.04641
48	1.65351	2.01658	2.04552	6.43483	1.60190	1.85503	17.52953	1.05396
49	1.71382	2.09693	2.12877	6.48026	1.63569	1.89416	17.89922	1.08828
50	1.77414	2.17728	2.21203	6.52569	1.67256	1.93685	18.30266	1.12260
51	1.83446	2.25763	2.29528	6.57112	1.71269	1.98332	18.74179	1.15692
52	1.89477	2.33798	2.37854	6.61656	1.75627	2.03380	19.21877	1.19124
53	1.95509	2.41833	2.46179	6.66199	1.80353	2.08852	19.73582	1.22556
54	2.01540	2.49868	2.54504	6.70742	1.85468	2.14776	20.29561	1.25988
55	2.07572	2.57903	2.62830	6.75285	1.91000	2.21182	20.90097	1.29420
56	2.13604	2.65938	2.71155	6.79828	1.96976	2.28102	21.55492	1.32852
57	2.19635	2.73973	2.79481	6.84372	2.03428	2.35574	22.26099	1.36283
58	2.25667	2.82008	2.87806	6.88915	2.10390	2.43636	23.02280	1.39715
59	2.31699	2.90043	2.96131	6.93458	2.17899	2.52332	23.84454	1.43147
60	2.37730	2.98078	3.04457	6.98001	2.25997	2.61709	24.73071	1.46579
61	2.43762	3.06113	3.12782	7.02545	2.34730	2.71821	25.68623	1.50011
62	2.49793	3.14148	3.21108	7.07088	2.44145	2.82725	26.71658	1.53443
63	2.55825	3.22183	3.29433	7.11631	2.54300	2.94484	27.82777	1.56875
64	2.61857	3.30218	3.37758	7.16174	2.65253	3.07168	29.02640	1.60307
65	2.67888	3.38253	3.46084	7.20718	2.77071	3.20854	30.31961	1.63739

Hardin 1996 Time Period 4 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HQGV	LDDV	LDDT	HDDV	MC
3	10.12690	12.86471	14.09942	21.59122	1.62326	2.32586	6.52089	16.22037
4	7.38032	9.48401	10.38653	17.61893	1.54113	2.20818	6.19097	13.68281
5	5.85266	7.56552	8.25929	15.22738	1.46445	2.09830	5.88291	11.80335
6	4.88437	6.33251	6.88321	13.52633	1.39280	1.99565	5.59510	10.38475
7	4.21754	5.47567	5.92335	12.20076	1.32583	1.89968	5.32606	9.29547
8	3.79085	4.91141	5.28685	11.23314	1.26319	1.80993	5.07441	8.44592
9	3.46144	4.47350	4.79342	10.39191	1.20456	1.72593	4.83892	7.77379
10	3.19428	4.11807	4.39424	9.64206	1.14967	1.64728	4.61841	7.23497
11	2.97243	3.82281	4.06402	8.97029	1.09825	1.57360	4.41183	6.79763
12	2.78456	3.57267	3.78560	8.36607	1.05005	1.50454	4.21821	6.43843
13	2.62283	3.35716	3.54693	7.82088	1.00485	1.43977	4.03663	6.14005
14	2.48160	3.16872	3.33935	7.32757	0.96244	1.37901	3.86627	5.88934
15	2.35676	3.00181	3.15645	6.88011	0.92264	1.32198	3.70636	5.67630
16	2.24520	2.85223	2.99342	6.47338	0.88525	1.26841	3.55619	5.49320
17	2.14457	2.71681	2.84657	6.10291	0.85014	1.21809	3.41511	5.33397
18	2.05302	2.59305	2.71305	5.76483	0.81713	1.17080	3.28252	5.19386
19	1.96910	2.47903	2.59062	5.45577	0.78609	1.12633	3.15785	5.06913
20	1.88806	2.38421	2.48821	5.17681	0.75690	1.08451	3.04059	4.95678
21	1.81594	2.29826	2.39633	4.92733	0.72944	1.04516	2.93026	4.85446
22	1.75000	2.21951	2.31228	4.69898	0.70359	1.00812	2.82642	4.76031
23	1.68943	2.14699	2.23501	4.48971	0.67925	0.97326	2.72866	4.67285
24	1.63355	2.07991	2.16364	4.29769	0.65634	0.94042	2.63660	4.59096
25	1.58180	2.01765	2.09745	4.12132	0.63475	0.90949	2.54989	4.51376
26	1.53372	1.95966	2.03585	3.95912	0.61442	0.88036	2.46820	4.44061
27	1.48889	1.90551	1.97835	3.80983	0.59526	0.85290	2.39124	4.37104
28	1.44697	1.85483	1.92454	3.67229	0.57720	0.82703	2.31871	4.30472
29	1.40768	1.80731	1.87407	3.54545	0.56019	0.80266	2.25036	4.24146
30	1.37075	1.76269	1.82667	3.42841	0.54416	0.77968	2.18595	4.18111
31	1.33597	1.72074	1.78207	3.32030	0.52905	0.75803	2.12525	4.12365
32	1.30314	1.68125	1.74007	3.22040	0.51481	0.73763	2.06806	4.06905
33	1.27209	1.64406	1.70049	3.12802	0.50140	0.71841	2.01418	4.01739
34	1.24267	1.60902	1.66316	3.04255	0.48876	0.70031	1.96342	3.96867
35	1.21476	1.57597	1.62794	2.96346	0.47687	0.68327	1.91564	3.92300
36	1.18822	1.54480	1.59469	2.89023	0.46567	0.66722	1.87066	3.88043
37	1.16296	1.51538	1.56330	2.82244	0.45514	0.65213	1.82834	3.84100
38	1.13888	1.48761	1.53365	2.75966	0.44523	0.63794	1.78856	3.80476
39	1.11590	1.46138	1.50564	2.70155	0.43593	0.62461	1.75118	3.77173
40	1.09392	1.43660	1.47918	2.64776	0.42719	0.61209	1.71609	3.74188
41	1.07289	1.41316	1.45416	2.59801	0.41900	0.60036	1.68319	3.71521
42	1.05273	1.39099	1.43050	2.55202	0.41133	0.58937	1.65237	3.69161
43	1.03339	1.36998	1.40809	2.50955	0.40415	0.57908	1.62354	3.67091
44	1.01480	1.35006	1.38686	2.47038	0.39745	0.56948	1.59662	3.65302
45	0.99692	1.33111	1.36670	2.43432	0.39121	0.56053	1.57153	3.63767
46	0.97969	1.31305	1.34751	2.40119	0.38540	0.55221	1.54820	3.62458
47	0.96306	1.29578	1.32920	2.37083	0.38001	0.54449	1.52655	3.61335
48	0.94719	1.27922	1.31168	2.34297	0.37503	0.53735	1.50653	3.60354
49	0.94465	1.27643	1.30859	2.31670	0.37043	0.53077	1.48808	3.60354
50	0.94225	1.27380	1.30568	2.29307	0.36622	0.52473	1.47116	3.60354
51	0.93998	1.27131	1.30293	2.27197	0.36237	0.51922	1.45570	3.60354
52	0.93784	1.26896	1.30034	2.25329	0.35888	0.51422	1.44168	3.60354
53	0.93581	1.26674	1.29788	2.23693	0.35574	0.50971	1.42905	3.60354
54	0.93389	1.26464	1.29556	2.22283	0.35293	0.50569	1.41778	3.60354
55	0.93207	1.26264	1.29335	2.21090	0.35046	0.50214	1.40783	3.60354
56	0.96536	1.31607	1.35270	2.20111	0.34830	0.49906	1.39918	3.72860
57	0.99874	1.36960	1.41215	2.19340	0.34647	0.49643	1.39182	3.85367
58	1.03220	1.42322	1.47170	2.18774	0.34495	0.49425	1.38571	3.97873
59	1.06573	1.47691	1.53134	2.18411	0.34374	0.49252	1.38084	4.10379
60	1.09933	1.53069	1.59107	2.18249	0.34283	0.49122	1.37720	4.22886
61	1.13301	1.58453	1.65088	2.18289	0.34223	0.49035	1.37477	4.35392
62	1.16674	1.63845	1.71076	2.18530	0.34193	0.48992	1.37356	4.47898
63	1.20053	1.69243	1.77071	2.18976	0.34193	0.48992	1.37357	4.60404
64	1.23437	1.74647	1.83073	2.19629	0.34223	0.49035	1.37478	4.72911
65	1.26827	1.80056	1.89081	2.20492	0.34283	0.49122	1.37720	4.85417

Hardin 1996 Time Period 4 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	92.86440	121.69667	136.92313	248.90402	5.33607	6.16977	42.50887	159.45908
4	71.41754	93.64896	105.41019	227.41306	4.91779	5.68614	39.17668	127.17210
5	58.47733	76.49968	85.74988	208.23511	4.54056	5.24997	36.17154	103.86855
6	49.82408	64.95587	72.35118	191.09453	4.19990	4.85608	33.45772	86.67242
7	43.63530	56.68190	62.68059	175.75098	3.89187	4.49993	31.00386	73.72423
8	38.99324	50.48030	55.40804	161.99539	3.61300	4.17750	28.78236	63.79237
9	35.38506	45.67184	49.76407	149.64532	3.36023	3.88523	26.76866	56.04309
10	32.50163	41.84250	45.27235	138.54120	3.13083	3.61999	24.94122	49.89996
11	30.14551	38.72546	41.62244	128.54366	2.92241	3.37901	23.28087	44.95699
12	28.18469	36.14128	38.60368	119.53014	2.73284	3.15981	21.77066	40.92288
13	26.52760	33.96481	36.06854	111.39352	2.56021	2.96021	20.39549	37.58528
14	25.10873	32.10631	33.91072	104.03918	2.40286	2.77828	19.14198	34.78726
15	23.88010	30.49971	32.05199	97.38467	2.25929	2.61227	17.99823	32.41095
16	22.80557	29.09540	30.43369	91.35631	2.12816	2.46066	16.95367	30.36711
17	21.85762	27.85555	29.01085	85.89011	2.00830	2.32207	15.99883	28.58725
18	21.01482	26.75081	27.74883	80.92873	1.89864	2.19528	15.12526	27.01852
19	20.26027	25.75826	26.62039	76.42181	1.79824	2.07919	14.32541	25.61987
20	19.45294	24.88646	25.64288	72.32489	1.70625	1.97283	13.59261	24.35931
21	18.59464	23.88116	24.58554	68.59831	1.62192	1.87532	12.92076	23.21188
22	17.81349	22.96092	23.62160	65.20711	1.54456	1.78588	12.30450	22.15804
23	17.09938	22.11430	22.73820	62.11998	1.47357	1.70380	11.73899	21.18271
24	16.44389	21.33202	21.92497	59.30939	1.40840	1.62845	11.21986	20.27414
25	15.84001	20.60658	21.17334	56.75067	1.34857	1.55927	10.74323	19.42352
26	15.28182	19.93181	20.47621	54.42197	1.29364	1.49575	10.30558	18.62393
27	14.76432	19.30264	19.82779	52.30379	1.24320	1.43744	9.90377	17.87039
28	14.28325	18.71489	19.22314	50.37863	1.19690	1.38391	9.53496	17.15901
29	13.83495	18.16505	18.65823	48.63133	1.15443	1.33480	9.19662	16.48723
30	13.41627	17.65015	18.12959	47.04797	1.11550	1.28978	8.88643	15.85310
31	13.02446	17.16762	17.63426	45.61636	1.07984	1.24855	8.60234	15.25505
32	12.65711	16.71523	17.16968	44.32579	1.04722	1.21084	8.34251	14.69200
33	12.31214	16.29100	16.73366	43.16656	1.01744	1.17640	8.10528	14.16351
34	11.98766	15.89319	16.32422	42.13028	0.99031	1.14503	7.88912	13.66848
35	11.68204	15.52018	15.93965	41.20944	0.96566	1.11652	7.69271	13.20674
36	11.39379	15.17048	15.57835	40.39743	0.94333	1.09071	7.51488	12.77719
37	11.12158	14.84273	15.23890	39.68867	0.92320	1.06744	7.35452	12.37967
38	10.86423	14.53566	14.91997	39.07829	0.90515	1.04656	7.21068	12.01294
39	10.62065	14.24802	14.62030	38.56194	0.88906	1.02797	7.08256	11.67618
40	10.38984	13.97866	14.33875	38.13626	0.87485	1.01154	6.96937	11.36833
41	10.17093	13.72645	14.07419	37.79837	0.86244	0.99719	6.87048	11.08815
42	9.96306	13.49023	13.82548	37.54594	0.85175	0.98483	6.78534	10.83387
43	9.76548	13.26888	13.59157	37.37738	0.84273	0.97440	6.71346	10.60394
44	9.57746	13.06125	13.37136	37.29152	0.83532	0.96583	6.65444	10.39603
45	9.39832	12.86608	13.16379	37.28784	0.82949	0.95908	6.60796	10.20801
46	9.22741	12.68203	12.96766	37.36618	0.82519	0.95412	6.57375	10.03713
47	9.06408	12.50761	12.78177	37.52719	0.82242	0.95091	6.55163	9.88006
48	8.90772	12.34124	12.60489	37.77194	0.82114	0.94944	6.54148	9.73349
49	8.90772	12.34124	12.60489	38.10199	0.82136	0.94969	6.54326	9.73349
50	8.90772	12.34124	12.60489	38.51956	0.82308	0.95168	6.55694	9.73349
51	8.90772	12.34124	12.60489	39.02747	0.82631	0.95541	6.58263	9.73349
52	8.90772	12.34124	12.60489	39.62920	0.83106	0.96090	6.62046	9.73349
53	8.90772	12.34124	12.60489	40.32878	0.83735	0.96818	6.67063	9.73349
54	8.90772	12.34124	12.60489	41.13121	0.84524	0.97729	6.73343	9.73349
55	8.90772	12.34124	12.60489	42.04189	0.85475	0.98829	6.80920	9.73349
56	10.12960	14.36862	14.79494	43.06735	0.86594	1.00123	6.89837	12.07759
57	11.35148	16.39598	16.98497	44.21507	0.87888	1.01619	7.00143	14.42170
58	12.57336	18.42334	19.17500	45.49330	0.89363	1.03325	7.11898	16.76579
59	13.79523	20.45073	21.36507	46.91168	0.91029	1.05251	7.25169	19.10989
60	15.01712	22.47809	23.55510	48.48073	0.92895	1.07409	7.40033	21.45396
61	16.23897	24.50546	25.74515	50.21260	0.94972	1.09810	7.56578	23.79810
62	17.46083	26.53285	27.93521	52.12093	0.97272	1.12469	7.74901	26.14214
63	18.68269	28.56024	30.12526	54.22092	0.99809	1.15403	7.95113	28.48627
64	19.90459	30.58762	32.31531	56.52979	1.02599	1.18629	8.17340	30.83038
65	21.12643	32.61499	34.50539	59.06650	1.05659	1.22167	8.41718	33.17447

Hardin 1996 Time Period 4 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	2.13140	2.55600	2.57430	4.61466	2.72303	3.15332	29.79782	0.90987
4	1.95662	2.34746	2.37449	4.66241	2.60834	3.02051	28.54282	0.87028
5	1.85087	2.22165	2.25480	4.71016	2.50203	2.89740	27.37952	0.83742
6	1.77976	2.13753	2.17532	4.75792	2.40347	2.78326	26.30098	0.81079
7	1.72852	2.07746	2.11895	4.80567	2.31207	2.67742	25.30077	0.78987
8	1.68978	2.03261	2.07711	4.85342	2.22731	2.57926	24.37323	0.77420
9	1.65942	1.99804	2.04502	4.90117	2.14870	2.48824	23.51303	0.76331
10	1.63499	1.97076	2.01980	4.94893	2.07581	2.40383	22.71545	0.75676
11	1.61490	1.94887	1.99962	4.99668	2.00825	2.32559	21.97609	0.75411
12	1.59809	1.93108	1.98323	5.04443	1.94564	2.25309	21.29102	0.75497
13	1.58384	1.91648	1.96978	5.09219	1.88767	2.18596	20.65662	0.75894
14	1.57163	1.90442	1.95863	5.13994	1.83403	2.12384	20.06960	0.76566
15	1.56104	1.89440	1.94934	5.18769	1.78444	2.06641	19.52695	0.77476
16	1.55181	1.88605	1.94154	5.23545	1.73866	2.01340	19.02600	0.78591
17	1.54370	1.87907	1.93498	5.28320	1.69646	1.96453	18.56421	0.79880
18	1.53653	1.87324	1.92943	5.33095	1.65764	1.91957	18.13940	0.81313
19	1.53016	1.86836	1.92472	5.37870	1.62200	1.87831	17.74950	0.82862
20	1.53123	1.86675	1.92274	5.42646	1.58939	1.84055	17.39264	0.84500
21	1.53999	1.87892	1.93487	5.47421	1.55965	1.80611	17.06718	0.86203
22	1.54800	1.89023	1.94609	5.52196	1.53264	1.77483	16.77161	0.87948
23	1.55537	1.90077	1.95650	5.56971	1.50824	1.74657	16.50458	0.89714
24	1.56219	1.91063	1.96619	5.61746	1.48633	1.72120	16.26488	0.91483
25	1.56853	1.91987	1.97524	5.66522	1.46683	1.69861	16.05142	0.93238
26	1.57443	1.92854	1.98371	5.71297	1.44964	1.67871	15.86331	0.94962
27	1.57997	1.93668	1.99165	5.76072	1.43468	1.66139	15.69965	0.96643
28	1.58517	1.94433	1.99911	5.80848	1.42190	1.64659	15.55976	0.98268
29	1.59007	1.95154	2.00614	5.85623	1.41123	1.63423	15.44304	0.99828
30	1.59472	1.95832	2.01277	5.90398	1.40264	1.62428	15.34897	1.01314
31	1.59912	1.96472	2.01904	5.95174	1.39607	1.61668	15.27715	1.02720
32	1.60333	1.97075	2.02498	5.99949	1.39151	1.61140	15.22729	1.04042
33	1.60734	1.97644	2.03062	6.04724	1.38894	1.60842	15.19914	1.05277
34	1.61120	1.98183	2.03600	6.09499	1.38834	1.60773	15.19260	1.06424
35	1.61491	1.98692	2.04113	6.14275	1.38972	1.60932	15.20766	1.07484
36	1.61849	1.99176	2.04606	6.19050	1.39307	1.61321	15.24434	1.08460
37	1.62197	1.99635	2.05080	6.23825	1.39842	1.61940	15.30285	1.09356
38	1.62535	2.00074	2.05538	6.28601	1.40578	1.62792	15.38339	1.10179
39	1.62866	2.00494	2.05983	6.33376	1.41519	1.63882	15.48633	1.10937
40	1.63190	2.00899	2.06418	6.38151	1.42668	1.65213	15.61214	1.11639
41	1.63510	2.01291	2.06846	6.42926	1.44032	1.66791	15.76131	1.12298
42	1.63826	2.01673	2.07270	6.47702	1.45615	1.68624	15.93452	1.12927
43	1.64140	2.02049	2.07692	6.52477	1.47424	1.70720	16.13254	1.13542
44	1.64453	2.02422	2.08116	6.57252	1.49468	1.73087	16.35620	1.14160
45	1.64767	2.02796	2.08544	6.62027	1.51756	1.75736	16.60655	1.14801
46	1.65083	2.03173	2.08981	6.66803	1.54298	1.78680	16.88469	1.15484
47	1.65403	2.03558	2.09430	6.71578	1.57105	1.81930	17.19188	1.16232
48	1.65727	2.03956	2.09893	6.76353	1.60190	1.85503	17.52953	1.17071
49	1.71807	2.12096	2.18474	6.81129	1.63569	1.89416	17.89922	1.20883
50	1.77887	2.20236	2.27054	6.85904	1.67256	1.93685	18.30266	1.24695
51	1.83967	2.28376	2.35635	6.90679	1.71269	1.98332	18.74179	1.28507
52	1.90048	2.36517	2.44216	6.95455	1.75627	2.03380	19.21877	1.32319
53	1.96128	2.44657	2.52796	7.00230	1.80353	2.08852	19.73582	1.36131
54	2.02208	2.52797	2.61377	7.05005	1.85468	2.14776	20.29561	1.39943
55	2.08288	2.60938	2.69957	7.09781	1.91000	2.21182	20.90097	1.43755
56	2.14368	2.69078	2.78538	7.14556	1.96976	2.28102	21.55492	1.47568
57	2.20448	2.77218	2.87119	7.19331	2.03428	2.35574	22.26099	1.51380
58	2.26528	2.85358	2.95699	7.24106	2.10390	2.43636	23.02280	1.55192
59	2.32608	2.93499	3.04280	7.28882	2.17899	2.52332	23.84454	1.59004
60	2.38688	3.01639	3.12861	7.33657	2.25997	2.61709	24.73071	1.62816
61	2.44768	3.09779	3.21441	7.38432	2.34730	2.71821	25.68623	1.66628
62	2.50848	3.17920	3.30022	7.43207	2.44145	2.82725	26.71658	1.70440
63	2.56929	3.26060	3.38603	7.47983	2.54300	2.94484	27.82777	1.74252
64	2.63009	3.34200	3.47183	7.52758	2.65253	3.07168	29.02640	1.78064
65	2.69089	3.42341	3.55764	7.57533	2.77071	3.20854	30.31961	1.81877

Hardin 1999 Time Period 1 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	7.10588	9.56023	10.07361	15.75034	1.40899	2.05684	5.94344	16.26155
4	5.22597	7.07620	7.44291	12.88734	1.33770	1.95278	5.64274	13.73062
5	4.17835	5.66912	5.94139	11.15328	1.27114	1.85561	5.36196	11.85608
6	3.51344	4.76591	4.97278	9.91503	1.20895	1.76483	5.09964	10.44119
7	3.05501	4.13848	4.29819	8.94773	1.15082	1.67996	4.85442	9.35476
8	2.76354	3.72665	3.85274	8.24136	1.09645	1.60059	4.62506	8.50743
9	2.53813	3.40637	3.50692	7.62657	1.04556	1.52631	4.41041	7.83706
10	2.35468	3.14552	3.22629	7.07792	0.99792	1.45676	4.20943	7.29965
11	2.20177	2.92795	2.99325	6.58587	0.95328	1.39160	4.02115	6.86345
12	2.07174	2.74284	2.79593	6.14284	0.91145	1.33053	3.84467	6.50519
13	1.95933	2.58265	2.62601	5.74266	0.87221	1.27325	3.67917	6.20758
14	1.86073	2.44198	2.47753	5.38019	0.83540	1.21952	3.52390	5.95753
15	1.77318	2.31683	2.34611	5.05107	0.80085	1.16908	3.37815	5.74505
16	1.69460	2.20423	2.22843	4.75155	0.76840	1.12171	3.24128	5.56243
17	1.62339	2.10189	2.12197	4.47842	0.73792	1.07721	3.11269	5.40361
18	1.55831	2.00804	2.02479	4.22887	0.70927	1.03539	2.99184	5.26388
19	1.49839	1.92129	1.93533	4.00044	0.68233	0.99606	2.87821	5.13947
20	1.43646	1.84435	1.85511	3.79500	0.65699	0.95908	2.77133	5.02741
21	1.38007	1.77675	1.78489	3.61267	0.63315	0.92428	2.67077	4.92536
22	1.32851	1.71489	1.72072	3.44572	0.61072	0.89152	2.57613	4.83145
23	1.28114	1.65800	1.66177	3.29267	0.58959	0.86069	2.48703	4.74422
24	1.23744	1.60546	1.60739	3.15219	0.56970	0.83165	2.40312	4.66254
25	1.19697	1.55677	1.55703	3.02309	0.55096	0.80430	2.32409	4.58555
26	1.15935	1.51149	1.51023	2.90434	0.53331	0.77853	2.24964	4.51259
27	1.12428	1.46927	1.46661	2.79498	0.51668	0.75426	2.17948	4.44320
28	1.09149	1.42980	1.42585	2.69418	0.50101	0.73138	2.11338	4.37706
29	1.06074	1.39283	1.38767	2.60119	0.48624	0.70982	2.05108	4.31396
30	1.03184	1.35813	1.35184	2.51532	0.47233	0.68950	1.99238	4.25377
31	1.00461	1.32552	1.31816	2.43598	0.45921	0.67036	1.93705	4.19646
32	0.97889	1.29483	1.28646	2.36261	0.44685	0.65232	1.88493	4.14200
33	0.95456	1.26591	1.25659	2.29472	0.43521	0.63532	1.83581	4.09047
34	0.93150	1.23864	1.22841	2.23187	0.42424	0.61931	1.78956	4.04189
35	0.90959	1.21289	1.20180	2.17367	0.41392	0.60424	1.74600	3.99634
36	0.88875	1.18855	1.17666	2.11974	0.40420	0.59005	1.70501	3.95388
37	0.86890	1.16554	1.15288	2.06977	0.39506	0.57671	1.66644	3.91455
38	0.84995	1.14376	1.13038	2.02345	0.38646	0.56416	1.63018	3.87840
39	0.83185	1.12313	1.10906	1.98054	0.37838	0.55237	1.59611	3.84546
40	0.81452	1.10358	1.08886	1.94078	0.37080	0.54130	1.56413	3.81568
41	0.79791	1.08502	1.06970	1.90395	0.36369	0.53092	1.53414	3.78909
42	0.78198	1.06740	1.05150	1.86987	0.35703	0.52120	1.50605	3.76555
43	0.76667	1.05063	1.03420	1.83836	0.35081	0.51211	1.47977	3.74491
44	0.75194	1.03467	1.01774	1.80925	0.34499	0.50361	1.45524	3.72706
45	0.73775	1.01943	1.00204	1.78241	0.33957	0.49570	1.43237	3.71175
46	0.72406	1.00487	0.98705	1.75770	0.33453	0.48834	1.41110	3.69870
47	0.71083	0.99090	0.97268	1.73501	0.32985	0.48151	1.39137	3.68750
48	0.69823	0.97751	0.95893	1.71422	0.32552	0.47520	1.37312	3.67771
49	0.69650	0.97551	0.95679	1.69516	0.32154	0.46938	1.35631	3.67771
50	0.69488	0.97363	0.95478	1.67801	0.31788	0.46404	1.34088	3.67771
51	0.69334	0.97185	0.95288	1.66271	0.31454	0.45917	1.32680	3.67771
52	0.69188	0.97017	0.95109	1.64917	0.31151	0.45474	1.31402	3.67771
53	0.69051	0.96857	0.94939	1.63732	0.30878	0.45076	1.30250	3.67771
54	0.68920	0.96707	0.94778	1.62711	0.30634	0.44720	1.29223	3.67771
55	0.68796	0.96564	0.94625	1.61848	0.30420	0.44406	1.28316	3.67771
56	0.70919	0.99990	0.98212	1.61141	0.30233	0.44134	1.27528	3.80244
57	0.73048	1.03424	1.01805	1.60585	0.30074	0.43901	1.26857	3.92718
58	0.75182	1.06864	1.05406	1.60178	0.29941	0.43709	1.26300	4.05192
59	0.77321	1.10309	1.09013	1.59920	0.29836	0.43555	1.25856	4.17665
60	0.79465	1.13760	1.12625	1.59808	0.29758	0.43440	1.25524	4.30139
61	0.81614	1.17217	1.16243	1.59843	0.29705	0.43364	1.25303	4.42612
62	0.83766	1.20678	1.19867	1.60025	0.29679	0.43326	1.25193	4.55086
63	0.85923	1.24144	1.23495	1.60356	0.29679	0.43326	1.25193	4.67560
64	0.88083	1.27614	1.27128	1.60837	0.29705	0.43364	1.25304	4.80033
65	0.90246	1.31088	1.30765	1.61473	0.29758	0.43440	1.25524	4.92507

Hardin 1999 Time Period 1 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	62.39859	85.81073	91.82053	167.33778	4.95234	5.74691	40.62360	162.43896
4	48.45386	66.53874	71.19151	152.88936	4.56414	5.29643	37.43922	129.54860
5	40.06923	54.84875	58.47459	139.99608	4.21404	4.89015	34.56735	105.80960
6	34.47379	47.01491	49.87016	128.47246	3.89787	4.52326	31.97386	88.29211
7	30.47598	41.41173	43.68439	118.15703	3.61200	4.19152	29.62886	75.10197
8	27.47826	37.21397	39.04041	108.90919	3.35319	3.89118	27.50589	64.98450
9	25.14787	33.95744	35.43716	100.60626	3.11859	3.61895	25.58150	57.09044
10	23.28484	31.36095	32.56729	93.14096	2.90569	3.37189	23.83513	50.83246
11	21.76158	29.24425	30.23195	86.41963	2.71226	3.14742	22.24838	45.79707
12	20.49309	27.48653	28.29701	80.35986	2.53631	2.94324	20.80515	41.68759
13	19.42036	26.00375	26.66884	74.88965	2.37610	2.75733	19.49097	38.28769
14	18.50131	24.73569	25.28029	69.94531	2.23006	2.58786	18.29306	35.43735
15	17.70499	23.63812	24.08191	65.47151	2.09682	2.43324	17.20003	33.01666
16	17.00824	22.67783	23.03674	61.41866	1.97512	2.29202	16.20180	30.93460
17	16.39330	21.82950	22.11647	57.74371	1.86388	2.16293	15.28930	29.12148
18	15.84642	21.07338	21.29919	54.40820	1.76211	2.04482	14.45447	27.52342
19	15.35670	20.39412	20.56778	51.37820	1.66893	1.93669	13.69009	26.09863
20	14.73586	19.68634	19.80995	48.62387	1.58355	1.83762	12.98979	24.81454
21	13.99611	18.80945	18.90765	46.11848	1.50528	1.74679	12.34773	23.64561
22	13.32307	18.00847	18.08560	43.83858	1.43349	1.66348	11.75880	22.57211
23	12.70803	17.27336	17.33304	41.76314	1.36761	1.58703	11.21837	21.57855
24	12.14373	16.59586	16.64116	39.87355	1.30713	1.51685	10.72227	20.65298
25	11.62410	15.96923	16.00264	38.15334	1.25160	1.45241	10.26677	19.78647
26	11.14404	15.38784	15.41140	36.58777	1.20061	1.39324	9.84854	18.97194
27	10.69917	14.84700	14.86234	35.16368	1.15380	1.33892	9.46454	18.20433
28	10.28581	14.34280	14.35114	33.86942	1.11084	1.28906	9.11209	17.47966
29	9.90075	13.87190	13.87418	32.69470	1.07142	1.24332	8.78875	16.79532
30	9.54122	13.43143	13.42831	31.63019	1.03528	1.20138	8.49232	16.14935
31	9.20482	13.01894	13.01086	30.66776	1.00218	1.16298	8.22084	15.54012
32	8.88946	12.63225	12.61946	29.80011	0.97192	1.12785	7.97253	14.96656
33	8.59327	12.26944	12.25209	29.02075	0.94428	1.09578	7.74582	14.42819
34	8.31462	11.92882	11.90692	28.32411	0.91909	1.06656	7.53924	13.92391
35	8.05206	11.60886	11.58234	27.70497	0.89621	1.04000	7.35155	13.45354
36	7.80429	11.30814	11.27689	27.15909	0.87549	1.01596	7.18160	13.01596
37	7.57016	11.02540	10.98927	26.68259	0.85681	0.99428	7.02834	12.61101
38	7.34862	10.75946	10.71828	26.27220	0.84006	0.97484	6.89089	12.23743
39	7.13873	10.50922	10.46278	25.92511	0.82513	0.95751	6.76845	11.89437
40	6.93964	10.27367	10.22178	25.63892	0.81194	0.94221	6.66028	11.58077
41	6.75058	10.05183	9.99429	25.41176	0.80042	0.92884	6.56578	11.29535
42	6.57082	9.84276	9.77939	25.24203	0.79050	0.91733	6.48441	11.03633
43	6.39973	9.64555	9.57621	25.12875	0.78213	0.90761	6.41572	10.80210
44	6.23670	9.45932	9.38387	25.07100	0.77525	0.89964	6.35932	10.59031
45	6.08116	9.28312	9.20158	25.06848	0.76984	0.89335	6.31490	10.39877
46	5.93258	9.11598	9.02844	25.12119	0.76585	0.88873	6.28220	10.22470
47	5.79045	8.95688	8.86361	25.22942	0.76327	0.88574	6.26107	10.06470
48	5.65429	8.80474	8.70621	25.39397	0.76209	0.88437	6.25137	9.91538
49	5.65429	8.80474	8.70621	25.61589	0.76230	0.88460	6.25307	9.91538
50	5.65429	8.80474	8.70621	25.89661	0.76389	0.88645	6.26614	9.91538
51	5.65429	8.80474	8.70621	26.23807	0.76689	0.88993	6.29069	9.91538
52	5.65429	8.80474	8.70621	26.64262	0.77129	0.89504	6.32684	9.91538
53	5.65429	8.80474	8.70621	27.11296	0.77714	0.90182	6.37479	9.91538
54	5.65429	8.80474	8.70621	27.65236	0.78445	0.91031	6.43480	9.91538
55	5.65429	8.80474	8.70621	28.26463	0.79328	0.92056	6.50721	9.91538
56	6.31754	10.03620	9.96546	28.95410	0.80367	0.93261	6.59243	12.30329
57	6.98079	11.26766	11.22472	29.72566	0.81568	0.94655	6.69092	14.69121
58	7.64405	12.49912	12.48398	30.58505	0.82937	0.96244	6.80326	17.07906
59	8.30731	13.73058	13.74324	31.53857	0.84483	0.98038	6.93008	19.46696
60	8.97056	14.96204	15.00249	32.59344	0.86215	1.00047	7.07212	21.85486
61	9.63382	16.19348	16.26173	33.75781	0.88142	1.02284	7.23024	24.24278
62	10.29707	17.42493	17.52097	35.04077	0.90277	1.04761	7.40534	26.63066
63	10.96033	18.65637	18.78021	36.45258	0.92632	1.07494	7.59850	29.01859
64	11.62359	19.88783	20.03946	38.00481	0.95221	1.10499	7.81091	31.40649
65	12.28684	21.11929	21.29872	39.71027	0.98061	1.13794	8.04388	33.79442

Hardin 1999 Time Period 1 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	1.95447	2.44346	2.45808	4.19773	2.36287	2.78329	25.31313	0.91266
4	1.79006	2.23963	2.25841	4.24117	2.26335	2.66606	24.24698	0.87295
5	1.69102	2.11691	2.13884	4.28461	2.17110	2.55740	23.25877	0.83999
6	1.62471	2.03494	2.05940	4.32805	2.08558	2.45666	22.34256	0.81327
7	1.57715	1.97639	2.00296	4.37149	2.00627	2.36323	21.49290	0.79230
8	1.54134	1.93259	1.96094	4.41492	1.93271	2.27660	20.70497	0.77658
9	1.51339	1.89870	1.92857	4.45836	1.86450	2.19625	19.97424	0.76565
10	1.49096	1.87181	1.90298	4.50180	1.80126	2.12175	19.29671	0.75908
11	1.47257	1.85007	1.88234	4.54524	1.74263	2.05269	18.66861	0.75643
12	1.45722	1.83221	1.86542	4.58868	1.68830	1.98870	18.08665	0.75729
13	1.44421	1.81738	1.85136	4.63212	1.63800	1.92944	17.54773	0.76127
14	1.43306	1.80493	1.83956	4.67556	1.59145	1.87461	17.04904	0.76800
15	1.42340	1.79440	1.82956	4.71899	1.54842	1.82393	16.58807	0.77713
16	1.41496	1.78543	1.82101	4.76243	1.50870	1.77713	16.16252	0.78832
17	1.40753	1.77775	1.81367	4.80587	1.47208	1.73400	15.77026	0.80125
18	1.40095	1.77114	1.80732	4.84931	1.43839	1.69432	15.40937	0.81563
19	1.39507	1.76543	1.80179	4.89275	1.40747	1.65790	15.07813	0.83116
20	1.39688	1.76092	1.79666	4.93619	1.37918	1.62457	14.77499	0.84759
21	1.40521	1.76949	1.80497	4.97962	1.35337	1.59417	14.49851	0.86467
22	1.41281	1.77743	1.81263	5.02306	1.32993	1.56656	14.24742	0.88217
23	1.41978	1.78481	1.81972	5.06650	1.30875	1.54162	14.02058	0.89989
24	1.42619	1.79169	1.82631	5.10993	1.28975	1.51923	13.81695	0.91764
25	1.43212	1.79811	1.83245	5.15338	1.27282	1.49929	13.63562	0.93524
26	1.43762	1.80413	1.83818	5.19681	1.25790	1.48172	13.47581	0.95253
27	1.44274	1.80977	1.84355	5.24025	1.24493	1.46643	13.33679	0.96939
28	1.44752	1.81506	1.84858	5.28369	1.23383	1.45337	13.21795	0.98569
29	1.45199	1.82004	1.85331	5.32713	1.22458	1.44246	13.11880	1.00134
30	1.45620	1.82472	1.85776	5.37057	1.21712	1.43368	13.03888	1.01624
31	1.46017	1.82912	1.86196	5.41401	1.21142	1.42697	12.97787	1.03035
32	1.46392	1.83327	1.86593	5.45745	1.20747	1.42231	12.93551	1.04361
33	1.46747	1.83719	1.86969	5.50089	1.20524	1.41968	12.91160	1.05600
34	1.47084	1.84089	1.87326	5.54432	1.20472	1.41907	12.90604	1.06750
35	1.47406	1.84439	1.87667	5.58776	1.20591	1.42048	12.91883	1.07814
36	1.47713	1.84770	1.87992	5.63120	1.20882	1.42390	12.95000	1.08793
37	1.48008	1.85085	1.88304	5.67463	1.21346	1.42937	12.99970	1.09692
38	1.48291	1.85386	1.88604	5.71808	1.21985	1.43689	13.06813	1.10517
39	1.48563	1.85673	1.88895	5.76151	1.22801	1.44651	13.15557	1.11277
40	1.48827	1.85950	1.89179	5.80495	1.23799	1.45826	13.26244	1.11981
41	1.49082	1.86217	1.89456	5.84839	1.24982	1.47219	13.38916	1.12642
42	1.49331	1.86476	1.89728	5.89183	1.26355	1.48837	13.53631	1.13274
43	1.49573	1.86730	1.89999	5.93527	1.27925	1.50687	13.70453	1.13890
44	1.49811	1.86981	1.90269	5.97871	1.29699	1.52776	13.89453	1.14510
45	1.50044	1.87231	1.90541	6.02214	1.31684	1.55114	14.10721	1.15153
46	1.50274	1.87482	1.90816	6.06559	1.33890	1.57712	14.34349	1.15838
47	1.50502	1.87737	1.91097	6.10902	1.36326	1.60581	14.60445	1.16588
48	1.50729	1.87998	1.91385	6.15246	1.39003	1.63735	14.89128	1.17430
49	1.55760	1.95354	1.98948	6.19590	1.41934	1.67189	15.20534	1.21254
50	1.60792	2.02711	2.06510	6.23934	1.45134	1.70957	15.54806	1.25077
51	1.65823	2.10068	2.14073	6.28278	1.48616	1.75059	15.92110	1.28901
52	1.70855	2.17424	2.21636	6.32622	1.52398	1.79514	16.32628	1.32725
53	1.75887	2.24781	2.29198	6.36965	1.56498	1.84344	16.76553	1.36549
54	1.80919	2.32138	2.36761	6.41309	1.60937	1.89572	17.24106	1.40372
55	1.85950	2.39495	2.44324	6.45653	1.65738	1.95227	17.75531	1.44196
56	1.90982	2.46851	2.51886	6.49997	1.70923	2.01335	18.31084	1.48020
57	1.96013	2.54208	2.59449	6.54341	1.76522	2.07930	18.91063	1.51844
58	2.01045	2.61564	2.67012	6.58685	1.82563	2.15046	19.55777	1.55668
59	2.06077	2.68921	2.74575	6.63028	1.89079	2.22721	20.25583	1.59491
60	2.11108	2.76278	2.82137	6.67372	1.96106	2.30998	21.00864	1.63315
61	2.16140	2.83635	2.89700	6.71716	2.03683	2.39924	21.82033	1.67139
62	2.21172	2.90991	2.97263	6.76060	2.11854	2.49548	22.69563	1.70963
63	2.26203	2.98348	3.04825	6.80404	2.20665	2.59927	23.63956	1.74787
64	2.31235	3.05705	3.12388	6.84748	2.30169	2.71123	24.65778	1.78610
65	2.36267	3.13061	3.19951	6.89092	2.40424	2.83203	25.75636	1.82434

Hardin 1999 Time Period 2 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	64.81783	92.07356	98.32103	209.58728	4.95234	5.74691	40.62360	197.24521
4	50.28314	71.36060	76.17094	191.49092	4.56414	5.29643	37.43922	157.30737
5	41.53510	58.74309	62.46225	175.34232	4.21404	4.89015	34.56735	128.48172
6	35.69432	50.27078	53.16718	160.90926	3.89787	4.52326	31.97386	107.21074
7	31.52071	44.20778	46.47884	147.98935	3.61200	4.19152	29.62886	91.19427
8	28.39148	39.66743	41.45680	136.40666	3.35319	3.89118	27.50589	78.90887
9	25.95944	36.14861	37.56157	126.00739	3.11859	3.61895	25.58150	69.32336
10	24.01573	33.34665	34.46107	116.65726	2.90569	3.37189	23.83513	61.72446
11	22.42706	31.06566	31.94002	108.23891	2.71226	3.14742	22.24838	55.61018
12	21.10451	29.17409	29.85292	100.64917	2.53631	2.94324	20.80515	50.62010
13	19.98639	27.58031	28.09813	93.79781	2.37610	2.75733	19.49097	46.49167
14	19.02863	26.21854	26.60266	87.60515	2.23006	2.58786	18.29306	43.03059
15	18.19887	25.04047	25.31281	82.00182	2.09682	2.43324	17.20003	40.09126
16	17.47287	24.00978	24.18837	76.92567	1.97512	2.29202	16.20180	37.56305
17	16.83202	23.09879	23.19864	72.32289	1.86388	2.16293	15.28930	35.36142
18	16.26198	22.28601	22.31976	68.14520	1.76211	2.04482	14.45447	33.42094
19	15.75135	21.55466	21.53320	64.35020	1.66893	1.93669	13.69009	31.69087
20	15.11190	20.80788	20.73514	60.90047	1.58355	1.83762	12.98979	30.13162
21	14.35570	19.89214	19.79436	57.76254	1.50528	1.74679	12.34773	28.71220
22	13.66742	19.05392	18.93692	54.90697	1.43349	1.66348	11.75880	27.40872
23	13.03818	18.28293	18.15157	52.30751	1.36761	1.58703	11.21837	26.20221
24	12.46060	17.57074	17.42917	49.94086	1.30713	1.51685	10.72227	25.07835
25	11.92849	16.91052	16.76210	47.78632	1.25160	1.45241	10.26677	24.02615
26	11.43669	16.29669	16.14407	45.82547	1.20061	1.39324	9.84854	23.03711
27	10.98078	15.72457	15.56986	44.04184	1.15380	1.33892	9.46454	22.10497
28	10.55700	15.19033	15.03498	42.42078	1.11084	1.28906	9.11209	21.22505
29	10.16213	14.69071	14.53572	40.94946	1.07142	1.24332	8.78875	20.39410
30	9.79338	14.22297	14.06889	39.61623	1.03528	1.20138	8.49232	19.60968
31	9.44833	13.78474	13.63173	38.41078	1.00218	1.16298	8.22084	18.86990
32	9.12484	13.37393	13.22187	37.32405	0.97192	1.12785	7.97253	18.17345
33	8.82106	12.98869	12.83722	36.34795	0.94428	1.09578	7.74582	17.51973
34	8.53533	12.62739	12.47591	35.47539	0.91909	1.06656	7.53924	16.90739
35	8.26618	12.28851	12.13632	34.69995	0.89621	1.04000	7.35155	16.33624
36	8.01230	11.97065	11.81696	34.01622	0.87549	1.01596	7.18160	15.80493
37	7.77252	11.67255	11.51648	33.41943	0.85681	0.99428	7.02834	15.31321
38	7.54576	11.39302	11.23365	32.90544	0.84006	0.97484	6.89089	14.85958
39	7.33108	11.13091	10.96731	32.47069	0.82513	0.95751	6.76845	14.44301
40	7.12761	10.88516	10.71639	32.11224	0.81194	0.94221	6.66028	14.06222
41	6.93453	10.65472	10.47989	31.82774	0.80042	0.92884	6.56578	13.71564
42	6.75112	10.43855	10.25680	31.61517	0.79050	0.91733	6.48441	13.40111
43	6.57671	10.23565	10.04622	31.47327	0.78213	0.90761	6.41572	13.11670
44	6.41066	10.04497	9.84721	31.40092	0.77525	0.89964	6.35932	12.85952
45	6.25236	9.86540	9.65887	31.39780	0.76984	0.89335	6.31490	12.62695
46	6.10125	9.69572	9.48025	31.46381	0.76585	0.88873	6.28220	12.41558
47	5.95677	9.53467	9.31037	31.59937	0.76327	0.88574	6.26107	12.22129
48	5.81837	9.38080	9.14828	31.80547	0.76209	0.88437	6.25137	12.03998
49	5.81837	9.38080	9.14828	32.08340	0.76230	0.88460	6.25307	12.03998
50	5.81837	9.38080	9.14828	32.43500	0.76389	0.88645	6.26614	12.03998
51	5.81837	9.38080	9.14828	32.86267	0.76689	0.88993	6.29069	12.03998
52	5.81837	9.38080	9.14828	33.36938	0.77129	0.89504	6.32684	12.03998
53	5.81837	9.38080	9.14828	33.95845	0.77714	0.90182	6.37479	12.03998
54	5.81837	9.38080	9.14828	34.63405	0.78445	0.91031	6.43480	12.03998
55	5.81837	9.38080	9.14828	35.40091	0.79328	0.92056	6.50721	12.03998
56	6.52050	10.75214	10.51576	36.26443	0.80367	0.93261	6.59243	14.93955
57	7.22263	12.12348	11.88326	37.23082	0.81568	0.94655	6.69092	17.83910
58	7.92476	13.49483	13.25075	38.30717	0.82937	0.96244	6.80326	20.73866
59	8.62689	14.86617	14.61825	39.50145	0.84483	0.98038	6.93008	23.63821
60	9.32903	16.23749	15.98573	40.82266	0.86215	1.00047	7.07212	26.53775
61	10.03116	17.60881	17.35320	42.28099	0.88142	1.02284	7.23024	29.43738
62	10.73329	18.98015	18.72067	43.88789	0.90277	1.04761	7.40534	32.33690
63	11.43542	20.35149	20.08817	45.65614	0.92632	1.07494	7.59850	35.23650
64	12.13755	21.72282	21.45563	47.60028	0.95221	1.10499	7.81091	38.13609
65	12.83968	23.09416	22.82312	49.73633	0.98061	1.13794	8.04388	41.03566

Hardin 1999 Time Period 2 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HOGV	LDDV	LDDT	HDDV	MC
3	1.97094	2.45219	2.45453	4.06945	2.36287	2.78329	25.31313	0.82775
4	1.80433	2.24667	2.25291	4.11156	2.26335	2.66606	24.24698	0.79173
5	1.70406	2.12302	2.13214	4.15367	2.17110	2.55740	23.25877	0.76184
6	1.63700	2.04047	2.05186	4.19578	2.08558	2.45666	22.34256	0.73761
7	1.58896	1.98153	1.99478	4.23790	2.00627	2.36323	21.49290	0.71858
8	1.55282	1.93745	1.95223	4.28000	1.93271	2.27660	20.70497	0.70432
9	1.52464	1.90334	1.91940	4.32211	1.86450	2.19625	19.97424	0.69442
10	1.50206	1.87627	1.89339	4.36423	1.80126	2.12175	19.29671	0.68845
11	1.48355	1.85436	1.87235	4.40634	1.74263	2.05269	18.66861	0.68605
12	1.46812	1.83634	1.85505	4.44845	1.68830	1.98870	18.08665	0.68683
13	1.45505	1.82135	1.84063	4.49056	1.63800	1.92944	17.54773	0.69044
14	1.44386	1.80875	1.82847	4.53267	1.59145	1.87461	17.04904	0.69655
15	1.43417	1.79807	1.81813	4.57478	1.54842	1.82393	16.58807	0.70483
16	1.42570	1.78894	1.80924	4.61689	1.50870	1.77713	16.16252	0.71498
17	1.41825	1.78111	1.80156	4.65900	1.47208	1.73400	15.77026	0.72671
18	1.41164	1.77434	1.79488	4.70111	1.43839	1.69432	15.40937	0.73974
19	1.40575	1.76847	1.78903	4.74322	1.40747	1.65790	15.07813	0.75383
20	1.40765	1.76369	1.78348	4.78534	1.37918	1.62457	14.77499	0.76873
21	1.41616	1.77211	1.79149	4.82744	1.35337	1.59417	14.49851	0.78422
22	1.42392	1.77989	1.79886	4.86955	1.32993	1.56656	14.24742	0.80010
23	1.43103	1.78711	1.80567	4.91167	1.30875	1.54162	14.02058	0.81617
24	1.43757	1.79383	1.81199	4.95378	1.28975	1.51923	13.81695	0.83226
25	1.44361	1.80010	1.81785	4.99589	1.27282	1.49929	13.63562	0.84822
26	1.44921	1.80597	1.82333	5.03800	1.25790	1.48172	13.47581	0.86391
27	1.45441	1.81146	1.82844	5.08011	1.24493	1.46643	13.33679	0.87920
28	1.45926	1.81660	1.83323	5.12222	1.23383	1.45337	13.21795	0.89398
29	1.46381	1.82143	1.83772	5.16433	1.22458	1.44246	13.11880	0.90817
30	1.46807	1.82597	1.84194	5.20644	1.21712	1.43368	13.03888	0.92169
31	1.47207	1.83024	1.84592	5.24856	1.21142	1.42697	12.97787	0.93449
32	1.47585	1.83426	1.84967	5.29067	1.20747	1.42231	12.93551	0.94652
33	1.47943	1.83804	1.85322	5.33278	1.20524	1.41968	12.91160	0.95775
34	1.48282	1.84161	1.85659	5.37489	1.20472	1.41907	12.90604	0.96819
35	1.48604	1.84498	1.85979	5.41700	1.20591	1.42048	12.91883	0.97783
36	1.48911	1.84818	1.86285	5.45911	1.20882	1.42390	12.95000	0.98671
37	1.49204	1.85120	1.86577	5.50122	1.21346	1.42937	12.99970	0.99486
38	1.49484	1.85408	1.86858	5.54333	1.21985	1.43689	13.06813	1.00234
39	1.49754	1.85683	1.87129	5.58544	1.22801	1.44651	13.15557	1.00924
40	1.50013	1.85947	1.87392	5.62755	1.23799	1.45826	13.26244	1.01563
41	1.50264	1.86201	1.87648	5.66966	1.24982	1.47219	13.38916	1.02162
42	1.50506	1.86447	1.87899	5.71177	1.26355	1.48837	13.53631	1.02735
43	1.50741	1.86687	1.88146	5.75389	1.27925	1.50687	13.70453	1.03294
44	1.50971	1.86923	1.88392	5.79600	1.29699	1.52776	13.89453	1.03857
45	1.51195	1.87158	1.88638	5.83811	1.31684	1.55114	14.10721	1.04439
46	1.51415	1.87392	1.88885	5.88022	1.33890	1.57712	14.34349	1.05060
47	1.51632	1.87628	1.89135	5.92233	1.36326	1.60581	14.60445	1.05741
48	1.51846	1.87869	1.89391	5.96444	1.39003	1.63735	14.89128	1.06504
49	1.56897	1.95212	1.96850	6.00655	1.41934	1.67189	15.20534	1.09972
50	1.61948	2.02554	2.04309	6.04867	1.45134	1.70957	15.54806	1.13440
51	1.66999	2.09897	2.11768	6.09077	1.48616	1.75059	15.92110	1.16908
52	1.72050	2.17239	2.19227	6.13289	1.52398	1.79514	16.32628	1.20376
53	1.77101	2.24582	2.26686	6.17500	1.56498	1.84344	16.76553	1.23844
54	1.82152	2.31924	2.34145	6.21711	1.60937	1.89572	17.24106	1.27312
55	1.87204	2.39267	2.41605	6.25922	1.65738	1.95227	17.75531	1.30780
56	1.92254	2.46609	2.49064	6.30133	1.70923	2.01335	18.31084	1.34248
57	1.97305	2.53952	2.56523	6.34344	1.76522	2.07930	18.91063	1.37716
58	2.02357	2.61294	2.63982	6.38555	1.82563	2.15046	19.55777	1.41185
59	2.07408	2.68637	2.71441	6.42766	1.89079	2.22721	20.25583	1.44652
60	2.12459	2.75980	2.78900	6.46977	1.96106	2.30998	21.00864	1.48120
61	2.17510	2.83322	2.86359	6.51188	2.03683	2.39924	21.82033	1.51589
62	2.22561	2.90664	2.93818	6.55399	2.11854	2.49548	22.69563	1.55056
63	2.27612	2.98007	3.01277	6.59611	2.20665	2.59927	23.63956	1.58525
64	2.32663	3.05350	3.08736	6.63822	2.30169	2.71123	24.65778	1.61992
65	2.37714	3.12692	3.16195	6.68033	2.40424	2.83203	25.75636	1.65461

Hardin 1999 Time Period 3 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	9.49308	11.69840	12.17378	22.70331	1.40899	2.05684	5.94344	18.58907
4	6.75618	8.37963	8.67456	17.59242	1.33770	1.95278	5.64274	16.08623
5	5.28297	6.57439	6.76801	14.76245	1.27114	1.85561	5.36196	14.23249
6	4.37123	5.44856	5.57773	12.89187	1.20895	1.76483	5.09964	12.83329
7	3.75461	4.68325	4.76847	11.51708	1.15082	1.67996	4.85442	11.75891
8	3.39761	4.21199	4.26987	10.62250	1.09645	1.60059	4.62506	10.92097
9	3.12186	3.84993	3.88740	9.86202	1.04556	1.52631	4.41041	10.25804
10	2.89434	3.55647	3.57814	9.18878	0.99792	1.45676	4.20943	9.72658
11	2.70192	3.31300	3.32230	8.58826	0.95328	1.39160	4.02115	9.29522
12	2.53583	3.10701	3.10655	8.04948	0.91145	1.33053	3.84467	8.94094
13	2.38998	2.92979	2.92159	7.56382	0.87221	1.27325	3.67917	8.64663
14	2.26002	2.77509	2.76071	7.12430	0.83540	1.21952	3.52390	8.39935
15	2.14275	2.63830	2.61899	6.72517	0.80085	1.16908	3.37815	8.18922
16	2.03578	2.51598	2.49275	6.36161	0.76840	1.12171	3.24128	8.00862
17	1.93728	2.40548	2.37916	6.02953	0.73792	1.07721	3.11269	7.85157
18	1.84584	2.30476	2.27602	5.72543	0.70927	1.03539	2.99184	7.71338
19	1.76031	2.21220	2.18161	5.44627	0.68233	0.99606	2.87821	7.59036
20	1.68017	2.12894	2.09602	5.19870	0.65699	0.95908	2.77133	7.47954
21	1.61622	2.05273	2.01824	4.98508	0.63315	0.92428	2.67077	7.37862
22	1.55758	1.98289	1.94713	4.78945	0.61072	0.89152	2.57613	7.28576
23	1.50354	1.91860	1.88180	4.61001	0.58959	0.86069	2.48703	7.19950
24	1.45354	1.85915	1.82151	4.44520	0.56970	0.83165	2.40312	7.11872
25	1.40709	1.80398	1.76566	4.29362	0.55096	0.80430	2.32409	7.04258
26	1.36378	1.75261	1.71374	4.15404	0.53331	0.77853	2.24964	6.97043
27	1.32327	1.70465	1.66533	4.02534	0.51668	0.75426	2.17948	6.90182
28	1.28527	1.65976	1.62007	3.90655	0.50101	0.73138	2.11338	6.83640
29	1.24951	1.61766	1.57766	3.79678	0.48624	0.70982	2.05108	6.77400
30	1.21579	1.57811	1.53784	3.69524	0.47233	0.68950	1.99238	6.71448
31	1.18390	1.54091	1.50038	3.60123	0.45921	0.67036	1.93705	6.65781
32	1.15369	1.50586	1.46510	3.51411	0.44685	0.65232	1.88493	6.60395
33	1.12501	1.47280	1.43182	3.43332	0.43521	0.63532	1.83581	6.55300
34	1.09772	1.44160	1.40038	3.35834	0.42424	0.61931	1.78956	6.50495
35	1.07171	1.41212	1.37067	3.28870	0.41392	0.60424	1.74600	6.45990
36	1.04688	1.38426	1.34255	3.22399	0.40420	0.59005	1.70501	6.41791
37	1.02313	1.35788	1.31591	3.16384	0.39506	0.57671	1.66644	6.37902
38	1.00039	1.33291	1.29067	3.10790	0.38646	0.56416	1.63018	6.34327
39	0.97858	1.30925	1.26672	3.05587	0.37838	0.55237	1.59611	6.31069
40	0.95763	1.28681	1.24397	3.00747	0.37080	0.54130	1.56413	6.28125
41	0.93747	1.26551	1.22235	2.96245	0.36369	0.53092	1.53414	6.25495
42	0.91806	1.24527	1.20178	2.92059	0.35703	0.52120	1.50605	6.23167
43	0.89933	1.22601	1.18218	2.88167	0.35081	0.51211	1.47977	6.21126
44	0.88125	1.20766	1.16349	2.84553	0.34499	0.50361	1.45524	6.19361
45	0.86377	1.19014	1.14564	2.81198	0.33957	0.49570	1.43237	6.17848
46	0.84684	1.17337	1.12854	2.78089	0.33453	0.48834	1.41110	6.16556
47	0.83042	1.15728	1.11214	2.75212	0.32985	0.48151	1.39137	6.15449
48	0.81480	1.14181	1.09636	2.72543	0.32552	0.47520	1.37312	6.14481
49	0.81146	1.13789	1.09215	2.70007	0.32154	0.46938	1.35631	6.14481
50	0.80832	1.13421	1.08819	2.67708	0.31788	0.46404	1.34088	6.14481
51	0.80536	1.13073	1.08445	2.65635	0.31454	0.45917	1.32680	6.14481
52	0.80256	1.12744	1.08091	2.63777	0.31151	0.45474	1.31402	6.14481
53	0.79991	1.12434	1.07758	2.62126	0.30878	0.45076	1.30250	6.14481
54	0.79740	1.12140	1.07442	2.60673	0.30634	0.44720	1.29223	6.14481
55	0.79503	1.11861	1.07143	2.59412	0.30420	0.44406	1.28316	6.14481
56	0.81590	1.15408	1.10697	2.58337	0.30233	0.44134	1.27528	6.26816
57	0.83688	1.18967	1.14267	2.57444	0.30074	0.43901	1.26857	6.39151
58	0.85797	1.22539	1.17850	2.56729	0.29941	0.43709	1.26300	6.51487
59	0.87916	1.26123	1.21445	2.56189	0.29836	0.43555	1.25856	6.63822
60	0.90044	1.29717	1.25052	2.55822	0.29758	0.43440	1.25524	6.76157
61	0.92181	1.33322	1.28670	2.55627	0.29705	0.43364	1.25303	6.88493
62	0.94326	1.36936	1.32299	2.55605	0.29679	0.43326	1.25193	7.00828
63	0.96478	1.40560	1.35937	2.55756	0.29679	0.43326	1.25193	7.13163
64	0.98638	1.44191	1.39584	2.56081	0.29705	0.43364	1.25304	7.25498
65	1.00804	1.47831	1.43239	2.56584	0.29758	0.43440	1.25524	7.37834

Hardin 1999 Time Period 3 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HOGV	LDDV	LDDT	HDDV	MC
3	65.19751	93.07541	99.29895	215.17258	4.95234	5.74691	40.62360	202.13110
4	50.57024	72.13126	76.91841	196.59398	4.56414	5.29643	37.43922	161.20396
5	41.76517	59.36526	63.06056	180.01501	4.21404	4.89015	34.56735	131.66429
6	35.88593	50.79086	53.66200	165.19734	3.89787	4.52326	31.97386	109.86638
7	31.68472	44.65434	46.89844	151.93315	3.61200	4.19152	29.62886	93.45322
8	28.53488	40.05922	41.81987	140.04172	3.35319	3.89118	27.50589	80.86351
9	26.08690	36.49844	37.88094	129.36537	3.11859	3.61895	25.58150	71.04050
10	24.13054	33.66359	34.74588	119.76605	2.90569	3.37189	23.83513	63.25342
11	22.53160	31.35628	32.19696	111.12335	2.71226	3.14742	22.24838	56.98766
12	21.20056	29.44325	30.08699	103.33134	2.53631	2.94324	20.80515	51.87401
13	20.07532	27.83165	28.31316	96.29741	2.37610	2.75733	19.49097	47.64331
14	19.11148	26.45483	26.80157	89.93976	2.23006	2.58786	18.29306	44.09650
15	18.27647	25.26384	25.49792	84.18706	2.09682	2.43324	17.20003	41.08429
16	17.54587	24.22185	24.36154	78.97566	1.97512	2.29202	16.20180	38.49355
17	16.90097	23.30080	23.36131	74.25026	1.86388	2.16293	15.28930	36.23732
18	16.32729	22.47893	22.47313	69.96118	1.76211	2.04482	14.45447	34.24883
19	15.81338	21.73924	21.67824	66.06503	1.66893	1.93669	13.69009	32.47588
20	15.17101	20.98627	20.87425	62.52341	1.58355	1.83762	12.98979	30.87799
21	14.41223	20.06439	19.92780	59.30185	1.50528	1.74679	12.34773	29.42343
22	13.72157	19.22031	19.06514	56.37016	1.43349	1.66348	11.75880	28.08763
23	13.09010	18.44366	18.27498	53.70142	1.36761	1.58703	11.21837	26.85127
24	12.51044	17.72600	17.54810	51.27176	1.30713	1.51685	10.72227	25.69955
25	11.97638	17.06052	16.87685	49.05977	1.25160	1.45241	10.26677	24.62129
26	11.48274	16.44156	16.25490	47.04666	1.20061	1.39324	9.84854	23.60776
27	11.02510	15.86452	15.67699	45.21553	1.15380	1.33892	9.46454	22.65254
28	10.59969	15.32556	15.13864	43.55127	1.11084	1.28906	9.11209	21.75081
29	10.20329	14.82144	14.63612	42.04074	1.07142	1.24332	8.78875	20.89928
30	9.83310	14.34941	14.16622	40.67195	1.03528	1.20138	8.49232	20.09541
31	9.48669	13.90715	13.72619	39.43439	1.00218	1.16298	8.22084	19.33733
32	9.16193	13.49255	13.31363	38.31871	0.97192	1.12785	7.97253	18.62361
33	8.85696	13.10379	12.92645	37.31664	0.94428	1.09578	7.74582	17.95369
34	8.57012	12.73924	12.56279	36.42079	0.91909	1.06656	7.53924	17.32619
35	8.29994	12.39738	12.22100	35.62466	0.89621	1.04000	7.35155	16.74089
36	8.04511	12.07683	11.89960	34.92273	0.87549	1.01596	7.18160	16.19641
37	7.80443	11.77632	11.59723	34.31003	0.85681	0.99428	7.02834	15.69253
38	7.57687	11.49465	11.31267	33.78232	0.84006	0.97484	6.89089	15.22766
39	7.36144	11.23066	11.04472	33.33598	0.82513	0.95751	6.76845	14.80078
40	7.15727	10.98330	10.79234	32.96802	0.81194	0.94221	6.66028	14.41054
41	6.96357	10.75149	10.55451	32.67593	0.80042	0.92884	6.56578	14.05538
42	6.77958	10.53421	10.33020	32.45767	0.79050	0.91733	6.48441	13.73307
43	6.60465	10.33039	10.11852	32.31195	0.78213	0.90761	6.41572	13.44161
44	6.43812	10.13900	9.91850	32.23773	0.77525	0.89964	6.35932	13.17806
45	6.27939	9.95888	9.72925	32.23453	0.76984	0.89335	6.31490	12.93972
46	6.12788	9.78879	9.54980	32.30226	0.76585	0.88873	6.28220	12.72312
47	5.98302	9.62741	9.37916	32.44150	0.76327	0.88574	6.26107	12.52402
48	5.84428	9.47325	9.21635	32.65303	0.76209	0.88437	6.25137	12.33821
49	5.84428	9.47325	9.21635	32.93837	0.76230	0.88460	6.25307	12.33821
50	5.84428	9.47325	9.21635	33.29936	0.76389	0.88645	6.26614	12.33821
51	5.84428	9.47325	9.21635	33.73843	0.76689	0.88993	6.29069	12.33821
52	5.84428	9.47325	9.21635	34.25862	0.77129	0.89504	6.32684	12.33821
53	5.84428	9.47325	9.21635	34.86342	0.77714	0.90182	6.37479	12.33821
54	5.84428	9.47325	9.21635	35.55702	0.78445	0.91031	6.43480	12.33821
55	5.84428	9.47325	9.21635	36.34430	0.79328	0.92056	6.50721	12.33821
56	6.55253	10.86697	10.60038	37.23088	0.80367	0.93261	6.59243	15.30961
57	7.26079	12.26068	11.98441	38.22299	0.81568	0.94655	6.69092	18.28101
58	7.96905	13.65440	13.36845	39.32799	0.82937	0.96244	6.80326	21.25232
59	8.67731	15.04813	14.75249	40.55415	0.84483	0.98038	6.93008	24.22374
60	9.38556	16.44182	16.13651	41.91058	0.86215	1.00047	7.07212	27.19513
61	10.09382	17.83551	17.52052	43.40776	0.88142	1.02284	7.23024	30.16655
62	10.80208	19.22922	18.90454	45.05746	0.90277	1.04761	7.40534	33.13789
63	11.51034	20.62294	20.28857	46.87288	0.92632	1.07494	7.59850	36.10934
64	12.21860	22.01665	21.67259	48.86880	0.95221	1.10499	7.81091	39.08073
65	12.92685	23.41037	23.05663	51.06177	0.98061	1.13794	8.04388	42.05212

Hardin 1999 Time Period 3 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	1.97285	2.45343	2.45460	4.05802	2.36287	2.78329	25.31313	0.81913
4	1.80601	2.24771	2.25276	4.10001	2.26335	2.66606	24.24698	0.78349
5	1.70560	2.12395	2.13185	4.14201	2.17110	2.55740	23.25877	0.75391
6	1.63846	2.04132	2.05148	4.18400	2.08558	2.45666	22.34256	0.72993
7	1.59036	1.98234	1.99433	4.22599	2.00627	2.36323	21.49290	0.71110
8	1.55419	1.93822	1.95172	4.26799	1.93271	2.27660	20.70497	0.69700
9	1.52598	1.90408	1.91884	4.30998	1.86450	2.19625	19.97424	0.68719
10	1.50338	1.87699	1.89278	4.35197	1.80126	2.12175	19.29671	0.68129
11	1.48486	1.85506	1.87170	4.39396	1.74263	2.05269	18.66861	0.67891
12	1.46941	1.83702	1.85436	4.43596	1.68830	1.98870	18.08665	0.67968
13	1.45634	1.82202	1.83990	4.47795	1.63800	1.92944	17.54773	0.68326
14	1.44514	1.80940	1.82771	4.51994	1.59145	1.87461	17.04904	0.68930
15	1.43545	1.79869	1.81732	4.56193	1.54842	1.82393	16.58807	0.69750
16	1.42697	1.78955	1.80840	4.60393	1.50870	1.77713	16.16252	0.70754
17	1.41952	1.78170	1.80069	4.64592	1.47208	1.73400	15.77026	0.71914
18	1.41291	1.77492	1.79397	4.68791	1.43839	1.69432	15.40937	0.73204
19	1.40701	1.76903	1.78809	4.72990	1.40747	1.65790	15.07813	0.74598
20	1.40892	1.76422	1.78250	4.77190	1.37918	1.62457	14.77499	0.76073
21	1.41745	1.77262	1.79048	4.81389	1.35337	1.59417	14.49851	0.77606
22	1.42523	1.78039	1.79783	4.85588	1.32993	1.56656	14.24742	0.79177
23	1.43235	1.78759	1.80461	4.89787	1.30875	1.54162	14.02058	0.80768
24	1.43891	1.79430	1.81090	4.93987	1.28975	1.51923	13.81695	0.82360
25	1.44495	1.80056	1.81674	4.98186	1.27282	1.49929	13.63562	0.83940
26	1.45056	1.80641	1.82219	5.02385	1.25790	1.48172	13.47581	0.85492
27	1.45577	1.81188	1.82728	5.06585	1.24493	1.46643	13.33679	0.87005
28	1.46063	1.81701	1.83205	5.10783	1.23383	1.45337	13.21795	0.88468
29	1.46518	1.82183	1.83651	5.14983	1.22458	1.44246	13.11880	0.89872
30	1.46945	1.82635	1.84071	5.19182	1.21712	1.43368	13.03888	0.91210
31	1.47346	1.83061	1.84467	5.23382	1.21142	1.42697	12.97787	0.92477
32	1.47724	1.83461	1.84840	5.27581	1.20747	1.42231	12.93551	0.93667
33	1.48082	1.83838	1.85194	5.31780	1.20524	1.41968	12.91160	0.94779
34	1.48421	1.84194	1.85529	5.35979	1.20472	1.41907	12.90604	0.95811
35	1.48743	1.84530	1.85847	5.40179	1.20591	1.42048	12.91883	0.96766
36	1.49050	1.84848	1.86151	5.44378	1.20882	1.42390	12.95000	0.97644
37	1.49343	1.85150	1.86441	5.48577	1.21346	1.42937	12.99970	0.98451
38	1.49624	1.85436	1.86720	5.52777	1.21985	1.43689	13.06813	0.99192
39	1.49893	1.85710	1.86989	5.56976	1.22801	1.44651	13.15557	0.99874
40	1.50152	1.85973	1.87250	5.61175	1.23799	1.45826	13.26244	1.00506
41	1.50402	1.86225	1.87504	5.65374	1.24982	1.47219	13.38916	1.01099
42	1.50644	1.86470	1.87753	5.69574	1.26355	1.48837	13.53631	1.01666
43	1.50879	1.86709	1.87998	5.73773	1.27925	1.50687	13.70453	1.02219
44	1.51108	1.86944	1.88242	5.77972	1.29699	1.52776	13.89453	1.02776
45	1.51331	1.87177	1.88485	5.82171	1.31684	1.55114	14.10721	1.03352
46	1.51550	1.87409	1.88729	5.86371	1.33890	1.57712	14.34349	1.03967
47	1.51766	1.87644	1.88977	5.90570	1.36326	1.60581	14.60445	1.04641
48	1.51978	1.87883	1.89230	5.94770	1.39003	1.63735	14.89128	1.05396
49	1.52032	1.95226	1.96680	5.98969	1.41934	1.67189	15.20534	1.08828
50	1.62086	2.02568	2.04131	6.03168	1.45134	1.70957	15.54806	1.12260
51	1.67140	2.09910	2.11581	6.07367	1.48616	1.75059	15.92110	1.15692
52	1.72194	2.17252	2.19031	6.11567	1.52398	1.79514	16.32628	1.19124
53	1.77248	2.24595	2.26481	6.15766	1.56498	1.84344	16.76553	1.22556
54	1.82302	2.31937	2.33932	6.19965	1.60937	1.89572	17.24106	1.25988
55	1.87355	2.39279	2.41382	6.24164	1.65738	1.95227	17.75531	1.29419
56	1.92409	2.46622	2.48833	6.28363	1.70923	2.01335	18.31084	1.32852
57	1.97463	2.53964	2.56283	6.32563	1.76522	2.07930	18.91063	1.36283
58	2.02517	2.61306	2.63733	6.36762	1.82563	2.15046	19.55777	1.39715
59	2.07571	2.68649	2.71184	6.40961	1.89079	2.22721	20.25583	1.43147
60	2.12625	2.75991	2.78634	6.45160	1.96106	2.30998	21.00864	1.46579
61	2.17679	2.83333	2.86084	6.49360	2.03683	2.39924	21.82033	1.50011
62	2.22732	2.90675	2.93535	6.53559	2.11854	2.49548	22.69563	1.53443
63	2.27786	2.98018	3.00985	6.57759	2.20665	2.59927	23.63956	1.56875
64	2.32840	3.05360	3.08435	6.61958	2.30169	2.71123	24.65778	1.60307
65	2.37894	3.12702	3.15886	6.66157	2.40424	2.83203	25.75636	1.63739

Hardin 1999 Time Period 4 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	7.13247	9.59676	10.10656	15.85109	1.40899	2.05684	5.94344	16.31956
4	5.24368	7.10117	7.46458	12.96459	1.33770	1.95278	5.64274	13.78974
5	4.19160	5.68810	5.95744	11.21854	1.27114	1.85561	5.36196	11.91602
6	3.52407	4.78130	4.98556	9.97299	1.20895	1.76483	5.09964	10.50174
7	3.06393	4.15150	4.30886	9.00072	1.15082	1.67996	4.85442	9.41579
8	2.77176	3.73854	3.86250	8.29168	1.09645	1.60059	4.62506	8.56882
9	2.54580	3.41738	3.51597	7.67471	1.04556	1.52631	4.41041	7.89875
10	2.36189	3.15576	3.23472	7.12417	0.99792	1.45676	4.20943	7.36157
11	2.20856	2.93752	3.00113	6.63045	0.95328	1.39160	4.02115	6.92556
12	2.07816	2.75181	2.80331	6.18593	0.91145	1.33053	3.84467	6.56746
13	1.96540	2.59107	2.63292	5.78443	0.87221	1.27325	3.67917	6.26998
14	1.86649	2.44988	2.48401	5.42075	0.83540	1.21952	3.52390	6.02003
15	1.77864	2.32426	2.35217	5.09053	0.80085	1.16908	3.37815	5.80765
16	1.69977	2.21121	2.23410	4.79002	0.76840	1.12171	3.24128	5.62510
17	1.62829	2.10844	2.12727	4.51598	0.73792	1.07721	3.11269	5.46636
18	1.56295	2.01418	2.02972	4.26559	0.70927	1.03539	2.99184	5.32668
19	1.50278	1.92703	1.93992	4.03638	0.68233	0.99606	2.87821	5.20233
20	1.44066	1.84981	1.85946	3.83027	0.65699	0.95908	2.77133	5.09032
21	1.38418	1.78208	1.78915	3.64739	0.63315	0.92428	2.67077	4.98831
22	1.33253	1.72010	1.72488	3.47993	0.61072	0.89152	2.57613	4.89445
23	1.28507	1.66310	1.66585	3.32641	0.58959	0.86069	2.48703	4.80726
24	1.24129	1.61046	1.61140	3.18550	0.56970	0.83165	2.40312	4.72561
25	1.20074	1.56167	1.56097	3.05601	0.55096	0.80430	2.32409	4.64865
26	1.16305	1.51630	1.51410	2.93689	0.53331	0.77853	2.24964	4.57573
27	1.12791	1.47398	1.47042	2.82719	0.51668	0.75426	2.17948	4.50637
28	1.09505	1.43443	1.42959	2.72608	0.50101	0.73138	2.11338	4.44025
29	1.06424	1.39738	1.39135	2.63279	0.48624	0.70982	2.05108	4.37718
30	1.03527	1.36260	1.35547	2.54665	0.47233	0.68950	1.99238	4.31701
31	1.00797	1.32992	1.32174	2.46705	0.45921	0.67036	1.93705	4.25973
32	0.98220	1.29916	1.28999	2.39345	0.44685	0.65232	1.88493	4.20530
33	0.95781	1.27017	1.26007	2.32534	0.43521	0.63532	1.83581	4.15379
34	0.93469	1.24283	1.23184	2.26229	0.42424	0.61931	1.78956	4.10522
35	0.91273	1.21702	1.20519	2.20388	0.41392	0.60424	1.74600	4.05970
36	0.89184	1.19263	1.18001	2.14977	0.40420	0.59005	1.70501	4.01725
37	0.87193	1.16956	1.15618	2.09963	0.39506	0.57671	1.66644	3.97794
38	0.85293	1.14773	1.13364	2.05316	0.38646	0.56416	1.63018	3.94181
39	0.83478	1.12705	1.11228	2.01009	0.37838	0.55237	1.59611	3.90888
40	0.81740	1.10745	1.09204	1.97019	0.37080	0.54130	1.56413	3.87912
41	0.80075	1.08884	1.07284	1.93323	0.36369	0.53092	1.53414	3.85254
42	0.78476	1.07117	1.05461	1.89902	0.35703	0.52120	1.50605	3.82901
43	0.76941	1.05437	1.03727	1.86739	0.35081	0.51211	1.47977	3.80837
44	0.75463	1.03836	1.02077	1.83817	0.34499	0.50361	1.45524	3.79054
45	0.74039	1.02309	1.00504	1.81123	0.33957	0.49570	1.43237	3.77524
46	0.72666	1.00848	0.99001	1.78642	0.33453	0.48834	1.41110	3.76218
47	0.71339	0.99448	0.97562	1.76364	0.32985	0.48151	1.39137	3.75099
48	0.70075	0.98105	0.96183	1.74275	0.32552	0.47520	1.37312	3.74121
49	0.69900	0.97903	0.95967	1.72360	0.32154	0.46938	1.35631	3.74121
50	0.69736	0.97713	0.95764	1.70638	0.31788	0.46404	1.34088	3.74121
51	0.69580	0.97533	0.95572	1.69101	0.31454	0.45917	1.32680	3.74121
52	0.69433	0.97363	0.95391	1.67740	0.31151	0.45474	1.31402	3.74121
53	0.69294	0.97202	0.95219	1.66549	0.30878	0.45076	1.30250	3.74121
54	0.69162	0.97050	0.95056	1.65523	0.30634	0.44720	1.29223	3.74121
55	0.69037	0.96905	0.94902	1.64655	0.30420	0.44406	1.28316	3.74121
56	0.71160	1.00336	0.98489	1.63944	0.30233	0.44134	1.27528	3.86589
57	0.73289	1.03773	1.02083	1.63384	0.30074	0.43901	1.26857	3.99057
58	0.75424	1.07217	1.05684	1.62974	0.29941	0.43709	1.26300	4.11525
59	0.77564	1.10667	1.09292	1.62713	0.29836	0.43555	1.25856	4.23993
60	0.79708	1.14122	1.12906	1.62598	0.29758	0.43440	1.25524	4.36461
61	0.81857	1.17583	1.16525	1.62631	0.29705	0.43364	1.25303	4.48930
62	0.84010	1.21049	1.20149	1.62812	0.29679	0.43326	1.25193	4.61398
63	0.86167	1.24519	1.23778	1.63141	0.29679	0.43326	1.25193	4.73866
64	0.88328	1.27993	1.27412	1.63623	0.29705	0.43364	1.25304	4.86334
65	0.90493	1.31471	1.31050	1.64258	0.29758	0.43440	1.25524	4.98802

Hardin 1999 Time Period 4 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	62.45099	85.94423	91.96902	168.46506	4.95234	5.74691	40.62360	163.26372
4	48.49348	66.64156	71.30545	153.91931	4.56414	5.29643	37.43922	130.20636
5	40.10098	54.93179	58.56587	140.93915	4.21404	4.89015	34.56735	106.34685
6	34.50023	47.08435	49.94563	129.33789	3.89787	4.52326	31.97386	88.74037
7	30.49861	41.47137	43.74834	118.95297	3.61200	4.19152	29.62886	75.48331
8	27.49803	37.26631	39.09569	109.64285	3.35319	3.89118	27.50589	65.31439
9	25.16547	34.00418	35.48575	101.28400	3.11859	3.61895	25.58150	57.38026
10	23.30067	31.40331	32.61058	93.76840	2.90569	3.37189	23.83513	51.09056
11	21.77600	29.28311	30.27100	87.00179	2.71226	3.14742	22.24838	46.02962
12	20.50635	27.52254	28.33258	80.90121	2.53631	2.94324	20.80515	41.89925
13	19.43263	26.03740	26.70152	75.39413	2.37610	2.75733	19.49097	38.48206
14	18.51274	24.76733	25.31053	70.41649	2.23006	2.58786	18.29306	35.61728
15	17.71570	23.66806	24.11006	65.91257	2.09682	2.43324	17.20003	33.18431
16	17.01831	22.70627	23.06310	61.83240	1.97512	2.29202	16.20180	31.09169
17	16.40280	21.85660	22.14124	58.13271	1.86388	2.16293	15.28930	29.26932
18	15.85542	21.09929	21.32256	54.77470	1.76211	2.04482	14.45447	27.66316
19	15.36525	20.41891	20.58987	51.72430	1.66893	1.93669	13.69009	26.23114
20	14.74401	19.71030	19.83113	48.95143	1.58355	1.83762	12.98979	24.94051
21	14.00390	18.83258	18.92795	46.42918	1.50528	1.74679	12.34773	23.76566
22	13.33053	18.03081	18.10507	44.13390	1.43349	1.66348	11.75880	22.68672
23	12.71518	17.29492	17.35175	42.04448	1.36761	1.58703	11.21837	21.68810
24	12.15060	16.61668	16.65916	40.14217	1.30713	1.51685	10.72227	20.75784
25	11.63070	15.98933	16.01997	38.41034	1.25160	1.45241	10.26677	19.88693
26	11.15038	15.40725	15.42812	36.83424	1.20061	1.39324	9.84854	19.06827
27	10.70528	14.86575	14.87848	35.40056	1.15380	1.33892	9.46454	18.29674
28	10.29169	14.36090	14.36673	34.09758	1.11084	1.28906	9.11209	17.56841
29	9.90641	13.88939	13.88925	32.91493	1.07142	1.24332	8.78875	16.88062
30	9.54668	13.44833	13.44289	31.84328	1.03528	1.20138	8.49232	16.23134
31	9.21010	13.03529	13.02498	30.87434	1.00218	1.16298	8.22084	15.61903
32	8.89456	12.64808	12.63316	30.00085	0.97192	1.12785	7.97253	15.04254
33	8.59820	12.28479	12.26539	29.21625	0.94428	1.09578	7.74582	14.50144
34	8.31940	11.94374	11.91984	28.51491	0.91909	1.06656	7.53924	13.99461
35	8.05670	11.62337	11.59491	27.89162	0.89621	1.04000	7.35155	13.52185
36	7.80880	11.32228	11.28914	27.34204	0.87549	1.01596	7.18160	13.08205
37	7.57454	11.03921	11.00123	26.86232	0.85681	0.99428	7.02834	12.67504
38	7.35289	10.77298	10.72996	26.44919	0.84006	0.97484	6.89089	12.29956
39	7.14290	10.52249	10.47421	26.09975	0.82513	0.95751	6.76845	11.95477
40	6.94372	10.28672	10.23298	25.81163	0.81194	0.94221	6.66028	11.63957
41	6.75456	10.06469	10.00528	25.58296	0.80042	0.92884	6.56578	11.35271
42	6.57473	9.85547	9.79019	25.41208	0.79050	0.91733	6.48441	11.09236
43	6.40357	9.65814	9.58684	25.29802	0.78213	0.90761	6.41572	10.85695
44	6.24047	9.47181	9.39436	25.23988	0.77525	0.89964	6.35932	10.64408
45	6.08487	9.29555	9.21192	25.23735	0.76984	0.89335	6.31490	10.45157
46	5.93623	9.12835	9.03866	25.29041	0.76585	0.88873	6.28220	10.27662
47	5.79405	8.96922	8.87371	25.39938	0.76327	0.88574	6.26107	10.11580
48	5.65784	8.81704	8.71621	25.56503	0.76209	0.88437	6.25137	9.96572
49	5.65784	8.81704	8.71621	25.78845	0.76230	0.88460	6.25307	9.96572
50	5.65784	8.81704	8.71621	26.07104	0.76389	0.88645	6.26614	9.96572
51	5.65784	8.81704	8.71621	26.41483	0.76689	0.88993	6.29069	9.96572
52	5.65784	8.81704	8.71621	26.82211	0.77129	0.89504	6.32684	9.96572
53	5.65784	8.81704	8.71621	27.29559	0.77714	0.90182	6.37479	9.96572
54	5.65784	8.81704	8.71621	27.83864	0.78445	0.91031	6.43480	9.96572
55	5.65784	8.81704	8.71621	28.45503	0.79328	0.92056	6.50721	9.96572
56	6.32194	10.05148	9.97792	29.14914	0.80367	0.93261	6.59243	12.36576
57	6.98603	11.28593	11.23964	29.92590	0.81568	0.94655	6.69092	14.76580
58	7.65014	12.52037	12.50135	30.79108	0.82937	0.96244	6.80326	17.16580
59	8.31423	13.75482	13.76307	31.75102	0.84483	0.98038	6.93008	19.56581
60	8.97833	14.98927	15.02478	32.81302	0.86215	1.00047	7.07212	21.96584
61	9.64243	16.22371	16.28648	33.98520	0.88142	1.02284	7.23024	24.36586
62	10.30653	17.45813	17.54817	35.27684	0.90277	1.04761	7.40534	26.76588
63	10.97063	18.69257	18.80988	36.69814	0.92632	1.07494	7.59850	29.16591
64	11.63472	19.92700	20.07158	38.26080	0.95221	1.10499	7.81091	31.56598
65	12.29882	21.16145	21.33328	39.97778	0.98061	1.13794	8.04388	33.96597

Hardin 1999 Time Period 4 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	1.95526	2.44395	2.45814	4.19175	2.36287	2.78329	25.31313	0.90987
4	1.79075	2.24005	2.25839	4.23512	2.26335	2.66606	24.24698	0.87028
5	1.69165	2.11729	2.13877	4.27850	2.17110	2.55740	23.25877	0.83742
6	1.62531	2.03529	2.05929	4.32188	2.08558	2.45666	22.34256	0.81079
7	1.57773	1.97672	2.00283	4.36525	2.00627	2.36323	21.49290	0.78987
8	1.54191	1.93290	1.96079	4.40863	1.93271	2.27660	20.70497	0.77420
9	1.51394	1.89900	1.92840	4.45201	1.86450	2.19625	19.97424	0.76331
10	1.49151	1.87211	1.90279	4.49538	1.80126	2.12175	19.29671	0.75676
11	1.47311	1.85036	1.88213	4.53876	1.74263	2.05269	18.66861	0.75411
12	1.45775	1.83250	1.86520	4.58214	1.68830	1.98870	18.08665	0.75497
13	1.44474	1.81765	1.85112	4.62551	1.63800	1.92944	17.54773	0.75894
14	1.43359	1.80520	1.83931	4.66889	1.59145	1.87461	17.04904	0.76566
15	1.42393	1.79466	1.82930	4.71226	1.54842	1.82393	16.58807	0.77476
16	1.41549	1.78569	1.82074	4.75564	1.50870	1.77713	16.16252	0.78591
17	1.40806	1.77801	1.81339	4.79902	1.47208	1.73400	15.77026	0.79880
18	1.40147	1.77139	1.80702	4.84239	1.43839	1.69432	15.40937	0.81313
19	1.39560	1.76568	1.80148	4.88577	1.40747	1.65790	15.07813	0.82862
20	1.39741	1.76115	1.79634	4.92915	1.37918	1.62457	14.77499	0.84500
21	1.40575	1.76972	1.80463	4.97252	1.35337	1.59417	14.49851	0.86203
22	1.41335	1.77765	1.81228	5.01590	1.32993	1.56656	14.24742	0.87948
23	1.42033	1.78503	1.81937	5.05928	1.30875	1.54162	14.02058	0.89714
24	1.42674	1.79190	1.82595	5.10265	1.28975	1.51923	13.81695	0.91483
25	1.43268	1.79832	1.83208	5.14603	1.27282	1.49929	13.63562	0.93238
26	1.43818	1.80433	1.83780	5.18941	1.25790	1.48172	13.47581	0.94962
27	1.44330	1.80996	1.84316	5.23278	1.24493	1.46643	13.33679	0.96643
28	1.44808	1.81525	1.84818	5.27616	1.23383	1.45337	13.21795	0.98268
29	1.45256	1.82022	1.85290	5.31954	1.22458	1.44246	13.11880	0.99828
30	1.45678	1.82490	1.85734	5.36291	1.21712	1.43368	13.03888	1.01314
31	1.46074	1.82930	1.86153	5.40629	1.21142	1.42697	12.97787	1.02720
32	1.46449	1.83344	1.86549	5.44967	1.20747	1.42231	12.93551	1.04042
33	1.46805	1.83736	1.86925	5.49304	1.20524	1.41968	12.91160	1.05277
34	1.47142	1.84105	1.87281	5.53642	1.20472	1.41907	12.90604	1.06424
35	1.47464	1.84455	1.87621	5.57980	1.20591	1.42048	12.91883	1.07484
36	1.47771	1.84786	1.87945	5.62317	1.20882	1.42390	12.95000	1.08460
37	1.48066	1.85100	1.88257	5.66654	1.21346	1.42937	12.99970	1.09356
38	1.48348	1.85400	1.88557	5.70992	1.21985	1.43689	13.06813	1.10179
39	1.48621	1.85687	1.88847	5.75330	1.22801	1.44651	13.15557	1.10936
40	1.48884	1.85963	1.89130	5.79668	1.23799	1.45826	13.26244	1.11639
41	1.49140	1.86230	1.89406	5.84005	1.24982	1.47219	13.38916	1.12298
42	1.49388	1.86489	1.89678	5.88343	1.26355	1.48837	13.53631	1.12927
43	1.49630	1.86743	1.89948	5.92680	1.27925	1.50687	13.70453	1.13542
44	1.49867	1.86993	1.90217	5.97018	1.29699	1.52776	13.89453	1.14160
45	1.50101	1.87242	1.90488	6.01356	1.31684	1.55114	14.10721	1.14801
46	1.50330	1.87493	1.90762	6.05694	1.33890	1.57712	14.34349	1.15484
47	1.50558	1.87747	1.91041	6.10031	1.36326	1.60581	14.60445	1.16232
48	1.50784	1.88007	1.91329	6.14369	1.39003	1.63735	14.89128	1.17071
49	1.55817	1.95363	1.98888	6.18707	1.41934	1.67189	15.20534	1.20883
50	1.60850	2.02720	2.06448	6.23045	1.45134	1.70957	15.54806	1.24695
51	1.65882	2.10077	2.14007	6.27382	1.48616	1.75059	15.92110	1.28507
52	1.70915	2.17433	2.21567	6.31720	1.52398	1.79514	16.32628	1.32319
53	1.75948	2.24790	2.29126	6.36057	1.56498	1.84344	16.76553	1.36131
54	1.80981	2.32147	2.36686	6.40395	1.60937	1.89572	17.24106	1.39943
55	1.86014	2.39503	2.44246	6.44733	1.65738	1.95227	17.75531	1.43755
56	1.91046	2.46860	2.51805	6.49070	1.70923	2.01335	18.31084	1.47568
57	1.96079	2.54217	2.59365	6.53408	1.76522	2.07930	18.91063	1.51380
58	2.01112	2.61573	2.66924	6.57745	1.82563	2.15046	19.55777	1.55192
59	2.06145	2.68930	2.74484	6.62083	1.89079	2.22721	20.25583	1.59004
60	2.11178	2.76287	2.82043	6.66421	1.96106	2.30998	21.00864	1.62816
61	2.16211	2.83643	2.89603	6.70759	2.03683	2.39924	21.82033	1.66628
62	2.21243	2.91000	2.97162	6.75096	2.11854	2.49548	22.69563	1.70440
63	2.26276	2.98357	3.04722	6.79434	2.20665	2.59927	23.63956	1.74252
64	2.31309	3.05713	3.12281	6.83772	2.30169	2.71123	24.65778	1.78064
65	2.36342	3.13070	3.19841	6.88109	2.40424	2.83203	25.75636	1.81876

Hardin 2006 Time Period 1 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	5.77156	6.42784	7.61870	9.02790	1.06253	1.45048	4.45924	14.42757
4	4.23295	4.71491	5.59038	7.44202	1.00877	1.37709	4.23362	12.15553
5	3.38774	3.76715	4.46682	6.46321	0.95858	1.30857	4.02296	10.47274
6	2.85676	3.16865	3.75670	5.75421	0.91168	1.24455	3.82614	9.20258
7	2.49340	2.75747	3.26855	5.19468	0.86784	1.18470	3.64216	8.22729
8	2.26085	2.48989	2.94909	4.77956	0.82684	1.12873	3.47008	7.46663
9	2.08194	2.28309	2.70233	4.41700	0.78847	1.07635	3.30904	6.86484
10	1.93745	2.11560	2.50279	4.09293	0.75254	1.02730	3.15825	6.38240
11	1.81799	1.97670	2.33757	3.80194	0.71888	0.98135	3.01698	5.99082
12	1.71731	1.85924	2.19811	3.53970	0.68733	0.93828	2.88457	5.66921
13	1.63106	1.75828	2.07846	3.30264	0.65774	0.89789	2.76040	5.40204
14	1.55616	1.67028	1.97437	3.08778	0.62998	0.86000	2.64390	5.17757
15	1.49034	1.59264	1.88273	2.89257	0.60393	0.82443	2.53455	4.98682
16	1.43189	1.52343	1.80121	2.71485	0.57946	0.79103	2.43186	4.82288
17	1.37951	1.46115	1.72802	2.55272	0.55647	0.75964	2.33538	4.68032
18	1.33220	1.40465	1.66177	2.40452	0.53486	0.73015	2.24471	4.55487
19	1.28915	1.35303	1.60137	2.26883	0.51455	0.70242	2.15946	4.44319
20	1.23697	1.29791	1.53635	2.14684	0.49544	0.67634	2.07927	4.34259
21	1.18495	1.24747	1.47595	2.03870	0.47747	0.65179	2.00382	4.25098
22	1.13755	1.20154	1.42097	1.93966	0.46055	0.62870	1.93282	4.16668
23	1.09416	1.15955	1.37070	1.84887	0.44462	0.60695	1.86596	4.08838
24	1.05427	1.12100	1.32456	1.76552	0.42962	0.58647	1.80301	4.01505
25	1.01748	1.08547	1.28205	1.68893	0.41549	0.56719	1.74372	3.94593
26	0.98343	1.05263	1.24275	1.61848	0.40218	0.54902	1.68785	3.88044
27	0.95180	1.02215	1.20630	1.55359	0.38964	0.53190	1.63522	3.81815
28	0.92234	0.99381	1.17241	1.49379	0.37782	0.51576	1.58562	3.75877
29	0.89482	0.96737	1.14080	1.43862	0.36668	0.50056	1.53889	3.70212
30	0.86906	0.94264	1.11125	1.38767	0.35619	0.48623	1.49484	3.64809
31	0.84487	0.91947	1.08355	1.34060	0.34630	0.47273	1.45333	3.59664
32	0.82212	0.89769	1.05754	1.29708	0.33698	0.46001	1.41422	3.54776
33	0.80067	0.87719	1.03306	1.25681	0.32820	0.44803	1.37737	3.50150
34	0.78041	0.85786	1.00997	1.21952	0.31993	0.43674	1.34267	3.45788
35	0.76123	0.83958	0.98816	1.18500	0.31214	0.42611	1.30999	3.41699
36	0.74305	0.82229	0.96752	1.15302	0.30481	0.41610	1.27923	3.37888
37	0.72579	0.80588	0.94795	1.12338	0.29792	0.40669	1.25029	3.34357
38	0.70936	0.79031	0.92938	1.09592	0.29143	0.39784	1.22309	3.31112
39	0.69372	0.77549	0.91172	1.07047	0.28534	0.38953	1.19753	3.28154
40	0.67879	0.76138	0.89490	1.04690	0.27963	0.38172	1.17353	3.25482
41	0.66453	0.74792	0.87886	1.02507	0.27426	0.37440	1.15103	3.23094
42	0.65089	0.73507	0.86356	1.00487	0.26924	0.36755	1.12996	3.20981
43	0.63782	0.72278	0.84893	0.98620	0.26455	0.36113	1.11024	3.19128
44	0.62529	0.71102	0.83493	0.96895	0.26016	0.35515	1.09183	3.17526
45	0.61326	0.69975	0.82152	0.95305	0.25607	0.34957	1.07468	3.16152
46	0.60170	0.68893	0.80866	0.93842	0.25227	0.34437	1.05872	3.14980
47	0.59058	0.67855	0.79631	0.92498	0.24874	0.33956	1.04392	3.13974
48	0.57991	0.66856	0.78443	0.91269	0.24548	0.33511	1.03023	3.13096
49	0.57842	0.66703	0.78265	0.90160	0.24247	0.33100	1.01761	3.13096
50	0.57701	0.66559	0.78098	0.89165	0.23972	0.32724	1.00604	3.13096
51	0.57568	0.66423	0.77941	0.88277	0.23720	0.32380	0.99547	3.13096
52	0.57442	0.66294	0.77792	0.87493	0.23491	0.32068	0.98588	3.13096
53	0.57323	0.66173	0.77652	0.86809	0.23285	0.31787	0.97724	3.13096
54	0.57211	0.66058	0.77519	0.86222	0.23102	0.31536	0.96953	3.13096
55	0.57105	0.65950	0.77393	0.85728	0.22940	0.31315	0.96273	3.13096
56	0.58704	0.67541	0.79329	0.85325	0.22799	0.31123	0.95682	3.24293
57	0.60308	0.69137	0.81272	0.85013	0.22679	0.30959	0.95178	3.35491
58	0.61918	0.70738	0.83220	0.84788	0.22579	0.30823	0.94760	3.46689
59	0.63531	0.72344	0.85173	0.84651	0.22500	0.30715	0.94427	3.57886
60	0.65149	0.73954	0.87131	0.84601	0.22440	0.30634	0.94178	3.69084
61	0.66771	0.75568	0.89094	0.84637	0.22401	0.30580	0.94013	3.80282
62	0.68396	0.77186	0.91061	0.84761	0.22381	0.30553	0.93930	3.91479
63	0.70025	0.78807	0.93032	0.84973	0.22381	0.30553	0.93930	4.02677
64	0.71657	0.80432	0.95007	0.85275	0.22401	0.30580	0.94013	4.13874
65	0.73292	0.82059	0.96986	0.85668	0.22441	0.30634	0.94178	4.25072

Hardin 2006 Time Period 1 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	54.46208	56.53688	65.75253	72.12502	4.33945	4.81218	34.22868	155.12842
4	42.68652	44.50688	51.73729	65.89757	3.99930	4.43497	31.54562	123.71829
5	35.62119	37.28889	43.32820	60.34033	3.69252	4.09477	29.12584	101.04765
6	30.91096	32.47691	37.72214	55.37352	3.41548	3.78755	26.94061	84.31856
7	27.54651	29.03979	33.71779	50.92740	3.16499	3.50977	24.96477	71.72203
8	25.02319	26.46193	30.71455	46.94147	2.93820	3.25828	23.17595	62.05986
9	23.06058	24.45695	28.37871	43.36275	2.73264	3.03033	21.55452	54.52109
10	21.49055	22.85297	26.51001	40.14513	2.54609	2.82345	20.08304	48.54477
11	20.20592	21.54060	24.98108	37.24811	2.37660	2.63550	18.74609	43.73601
12	19.13542	20.44698	23.70699	34.63628	2.22243	2.46453	17.53003	39.81142
13	18.22961	19.52159	22.62889	32.27855	2.08204	2.30885	16.42273	36.56454
14	17.45320	18.72841	21.70482	30.14748	1.95408	2.16695	15.41339	33.84248
15	16.78033	18.04099	20.90393	28.21919	1.83732	2.03747	14.49243	31.53075
16	16.19156	17.43950	20.20317	26.47237	1.73069	1.91922	13.65133	29.54239
17	15.67206	16.90877	19.58487	24.38843	1.63321	1.81113	12.88246	27.81087
18	15.21028	16.43701	19.03526	23.45076	1.54404	1.71224	12.17905	26.28477
19	14.79710	16.01491	18.54350	22.14476	1.46238	1.62169	11.53500	24.92409
20	14.17977	15.41848	17.85472	20.95763	1.38758	1.53873	10.94494	23.69778
21	13.38881	14.62453	16.93930	19.87776	1.31899	1.46268	10.40396	22.58145
22	12.66974	13.90275	16.10712	18.89510	1.25608	1.39292	9.90774	21.55627
23	12.01320	13.24373	15.34728	18.00056	1.19835	1.32890	9.45238	20.60742
24	11.41138	12.63963	14.65075	17.18614	1.14536	1.27013	9.03438	19.72353
25	10.85771	12.08386	14.00996	16.44470	1.09670	1.21618	8.65058	18.89600
26	10.34662	11.57084	13.41845	15.76992	1.05203	1.16663	8.29818	18.11812
27	9.87339	11.09582	12.87076	15.15613	1.01101	1.12115	7.97464	17.38506
28	9.43396	10.65473	12.36218	14.59828	0.97336	1.07940	7.67767	16.69301
29	9.02484	10.24406	11.88868	14.09196	0.93882	1.04109	7.40523	16.03947
30	8.64299	9.86077	11.44675	13.63315	0.90716	1.00598	7.15547	15.42255
31	8.28578	9.50221	11.03333	13.21831	0.87816	0.97382	6.92672	14.84074
32	7.95089	9.16606	10.64575	12.84434	0.85163	0.94441	6.71750	14.29299
33	7.63630	8.85028	10.28166	12.50844	0.82741	0.91755	6.52647	13.77885
34	7.34022	8.55307	9.93899	12.20815	0.80535	0.89308	6.35242	13.29727
35	7.06105	8.27285	9.61589	11.94131	0.78530	0.87085	6.19427	12.84806
36	6.79739	8.00820	9.31075	11.70602	0.76714	0.85072	6.05108	12.43018
37	6.54799	7.75785	9.02210	11.50064	0.75077	0.83256	5.92195	12.04346
38	6.31171	7.52068	8.74864	11.32376	0.73609	0.81628	5.80614	11.68668
39	6.08755	7.29567	8.48921	11.17415	0.72301	0.80177	5.70296	11.35907
40	5.87460	7.08191	8.24275	11.05080	0.71146	0.78896	5.61182	11.05958
41	5.67203	6.87858	8.00831	10.95289	0.70136	0.77777	5.53220	10.78701
42	5.47911	6.68493	7.78503	10.87974	0.69267	0.76813	5.46364	10.53964
43	5.29516	6.50029	7.57214	10.83090	0.68533	0.75999	5.40576	10.31595
44	5.11958	6.32404	7.36893	10.80602	0.67931	0.75331	5.35824	10.11369
45	4.95180	6.15563	7.17475	10.80494	0.67456	0.74805	5.32081	9.93078
46	4.79131	5.99454	6.98900	10.82765	0.67107	0.74418	5.29327	9.76454
47	4.63765	5.84030	6.81117	10.87431	0.66881	0.74167	5.27546	9.61174
48	4.49040	5.69248	6.64075	10.94522	0.66778	0.74052	5.26729	9.46914
49	4.49040	5.69248	6.64075	11.04087	0.66796	0.74072	5.26871	9.46914
50	4.49040	5.69248	6.64075	11.16186	0.66936	0.74227	5.27973	9.46914
51	4.49040	5.69248	6.64075	11.30904	0.67198	0.74518	5.30041	9.46914
52	4.49040	5.69248	6.64075	11.48341	0.67584	0.74946	5.33088	9.46914
53	4.49040	5.69248	6.64075	11.68613	0.68096	0.75514	5.37128	9.46914
54	4.49040	5.69248	6.64075	11.91864	0.68737	0.76225	5.42184	9.46914
55	4.49040	5.69248	6.64075	12.18253	0.69511	0.77083	5.48286	9.46914
56	4.91926	6.21038	7.25195	12.47970	0.70421	0.78092	5.55465	11.74958
57	5.34813	6.72828	7.86316	12.81226	0.71473	0.79259	5.63764	14.03003
58	5.77701	7.24619	8.47437	13.18266	0.72673	0.80590	5.73229	16.31046
59	6.20587	7.76409	9.08559	13.59365	0.74028	0.82092	5.83915	18.59090
60	6.63474	8.28199	9.69680	14.04832	0.75545	0.83775	5.95884	20.87132
61	7.06362	8.79989	10.30801	14.55017	0.77234	0.85648	6.09206	23.15176
62	7.49248	9.31779	10.91922	15.10314	0.79105	0.87722	6.23960	25.43219
63	7.92136	9.83570	11.53044	15.71166	0.81168	0.90010	6.40235	27.71262
64	8.35023	10.35360	12.14165	16.38068	0.83437	0.92526	6.58132	29.99307
65	8.77909	10.87150	12.75286	17.11575	0.85925	0.95286	6.77762	32.27351

Hardin 2006 Time Period 1 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	1.74482	1.87282	2.33187	3.41867	1.84889	2.08304	12.70215	0.91266
4	1.59482	1.71181	2.13140	3.45404	1.77102	1.99530	12.16717	0.87295
5	1.50482	1.61520	2.01111	3.48942	1.69884	1.91398	11.67128	0.83999
6	1.44482	1.55080	1.93092	3.52480	1.63192	1.83858	11.21151	0.81327
7	1.40196	1.50480	1.87365	3.56017	1.56986	1.76867	10.78516	0.79230
8	1.36981	1.47030	1.83069	3.59555	1.51231	1.70383	10.38976	0.77658
9	1.34481	1.44346	1.79728	3.63093	1.45893	1.64369	10.02309	0.76565
10	1.32481	1.42199	1.77055	3.66630	1.40944	1.58794	9.68309	0.75908
11	1.30845	1.40443	1.74868	3.70168	1.36357	1.53625	9.36792	0.75643
12	1.29481	1.38979	1.73045	3.73706	1.32106	1.48836	9.07589	0.75729
13	1.28327	1.37741	1.71503	3.77243	1.28170	1.44401	8.80545	0.76127
14	1.27338	1.36679	1.70181	3.80781	1.24528	1.40298	8.55521	0.76800
15	1.26481	1.35759	1.69036	3.84319	1.21160	1.36504	8.32390	0.77713
16	1.25731	1.34954	1.68033	3.87856	1.18052	1.33002	8.11035	0.78832
17	1.25069	1.34244	1.67149	3.91394	1.15187	1.29774	7.91351	0.80125
18	1.24481	1.33612	1.66363	3.94932	1.12551	1.26804	7.73241	0.81563
19	1.23955	1.33047	1.65659	3.98469	1.10132	1.24079	7.56619	0.83116
20	1.24230	1.32256	1.64678	4.02007	1.07917	1.21584	7.41407	0.84759
21	1.25027	1.32492	1.64975	4.05544	1.05898	1.19309	7.27534	0.86467
22	1.25751	1.32706	1.65244	4.09082	1.04064	1.17243	7.14934	0.88217
23	1.26413	1.32902	1.65490	4.12620	1.02407	1.15376	7.03552	0.89989
24	1.27020	1.33081	1.65716	4.16157	1.00920	1.13700	6.93333	0.91764
25	1.27578	1.33246	1.65923	4.19695	0.99595	1.12208	6.84235	0.93524
26	1.28093	1.33399	1.66115	4.23233	0.98428	1.10893	6.76215	0.95253
27	1.28570	1.33540	1.66292	4.26770	0.97413	1.09749	6.69239	0.96939
28	1.29013	1.33671	1.66457	4.30308	0.96545	1.08771	6.63276	0.98569
29	1.29425	1.33793	1.66610	4.33846	0.95821	1.07955	6.58300	1.00134
30	1.29810	1.33907	1.66753	4.37384	0.95237	1.07298	6.54290	1.01624
31	1.30170	1.34014	1.66887	4.40921	0.94791	1.06796	6.51229	1.03035
32	1.30508	1.34114	1.67013	4.44459	0.94482	1.06447	6.49103	1.04361
33	1.30824	1.34207	1.67131	4.47997	0.94307	1.06250	6.47903	1.05600
34	1.31123	1.34296	1.67242	4.51534	0.94267	1.06205	6.47624	1.06750
35	1.31404	1.34379	1.67346	4.55072	0.94360	1.06310	6.48266	1.07814
36	1.31670	1.34458	1.67445	4.58609	0.94588	1.06566	6.49830	1.08793
37	1.31922	1.34532	1.67538	4.62147	0.94951	1.06975	6.52324	1.09691
38	1.32160	1.34602	1.67627	4.65685	0.95450	1.07538	6.55758	1.10517
39	1.32386	1.34669	1.67711	4.69222	0.96089	1.08258	6.60146	1.11277
40	1.32600	1.34733	1.67791	4.72760	0.96870	1.09137	6.65508	1.11981
41	1.32804	1.34793	1.67867	4.76298	0.97795	1.10180	6.71867	1.12642
42	1.32999	1.34851	1.67939	4.79835	0.98870	1.11391	6.79251	1.13274
43	1.33184	1.34906	1.68008	4.83373	1.00099	1.12775	6.87692	1.13891
44	1.33361	1.34958	1.68074	4.86911	1.01487	1.14339	6.97227	1.14511
45	1.33530	1.35008	1.68137	4.90448	1.03040	1.16089	7.07898	1.15153
46	1.33692	1.35056	1.68197	4.93986	1.04766	1.18033	7.19755	1.15838
47	1.33847	1.35102	1.68255	4.97524	1.06672	1.20181	7.32850	1.16589
48	1.33995	1.35146	1.68310	5.01062	1.08767	1.22541	7.47243	1.17430
49	1.37938	1.40225	1.74638	5.04599	1.11061	1.25125	7.63003	1.21254
50	1.41881	1.45304	1.80966	5.08137	1.13564	1.27946	7.80201	1.25077
51	1.45823	1.50383	1.87294	5.11674	1.16289	1.31016	7.98920	1.28901
52	1.49766	1.55462	1.93622	5.15212	1.19248	1.34350	8.19252	1.32725
53	1.53709	1.60540	1.99950	5.18750	1.22456	1.37964	8.41294	1.36549
54	1.57652	1.65619	2.06278	5.22287	1.25930	1.41878	8.65156	1.40373
55	1.61594	1.70698	2.12606	5.25825	1.29686	1.46109	8.90962	1.44196
56	1.65537	1.75777	2.18934	5.29363	1.33744	1.50681	9.18838	1.48020
57	1.69480	1.80856	2.25261	5.32900	1.38124	1.55617	9.48936	1.51844
58	1.73423	1.85935	2.31590	5.36438	1.42852	1.60942	9.81410	1.55668
59	1.77365	1.91014	2.37918	5.39976	1.47950	1.66687	10.16439	1.59492
60	1.81308	1.96093	2.44246	5.43513	1.53449	1.72881	10.54215	1.63315
61	1.85251	2.01172	2.50574	5.47051	1.59378	1.79561	10.94946	1.67139
62	1.89194	2.06251	2.56902	5.50589	1.65771	1.86764	11.38869	1.70963
63	1.93137	2.11330	2.63230	5.54127	1.72665	1.94532	11.86237	1.74787
64	1.97079	2.16409	2.69558	5.57664	1.80102	2.02911	12.37331	1.78610
65	2.01022	2.21487	2.75886	5.61202	1.88127	2.11951	12.92458	1.82434

Hardin 2006 Time Period 2 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	7.01363	7.43237	8.82139	11.51919	1.06253	1.45048	4.45924	16.09180
4	4.99217	5.29167	6.27710	9.07597	1.00877	1.37709	4.23362	13.84405
5	3.91500	4.14663	4.91546	7.68546	0.95858	1.30857	4.02296	12.17925
6	3.25341	3.44134	4.07642	6.74375	0.91168	1.24455	3.82614	10.92267
7	2.80855	2.96600	3.51077	6.03785	0.86784	1.18470	3.64216	9.95780
8	2.54432	2.67471	3.16255	5.56164	0.82684	1.12873	3.47008	9.20527
9	2.34191	2.45173	2.89611	5.15322	0.78847	1.07635	3.30904	8.60991
10	2.17730	2.27155	2.68107	4.79025	0.75254	1.02730	3.15825	8.13263
11	2.04019	2.12250	2.50343	4.46554	0.71888	0.98135	3.01698	7.74524
12	1.92369	1.99678	2.35382	4.17354	0.68733	0.93828	2.88457	7.42707
13	1.82306	1.88902	2.22579	3.90985	0.65774	0.89789	2.76040	7.16275
14	1.73489	1.79537	2.11470	3.67087	0.62998	0.86000	2.64390	6.94068
15	1.65669	1.71302	2.01718	3.45361	0.60393	0.82443	2.53455	6.75197
16	1.58659	1.63982	1.93067	3.25552	0.57946	0.79103	2.43186	6.58978
17	1.52317	1.57418	1.85322	3.07446	0.55647	0.75964	2.33538	6.44874
18	1.46530	1.51484	1.78335	2.90855	0.53486	0.73015	2.24471	6.32463
19	1.41212	1.46079	1.71984	2.75618	0.51455	0.70242	2.15946	6.21415
20	1.35248	1.40303	1.65153	2.62100	0.49544	0.67634	2.07927	6.11463
21	1.29678	1.34938	1.58730	2.50433	0.47747	0.65179	2.00382	6.02400
22	1.24596	1.30053	1.52882	2.39745	0.46055	0.62870	1.93282	5.94060
23	1.19938	1.25583	1.47533	2.29941	0.44462	0.60695	1.86596	5.86313
24	1.15651	1.21479	1.42622	2.20934	0.42962	0.58647	1.80301	5.79058
25	1.11691	1.17695	1.38096	2.12651	0.41549	0.56719	1.74372	5.72221
26	1.08020	1.14195	1.33911	2.05023	0.40218	0.54902	1.68785	5.65741
27	1.04606	1.10947	1.30028	1.97991	0.38964	0.53190	1.63522	5.59579
28	1.01421	1.07925	1.26416	1.91500	0.37782	0.51576	1.58562	5.53705
29	0.98442	1.05104	1.23046	1.85503	0.36668	0.50056	1.53889	5.48101
30	0.95647	1.02465	1.19894	1.79957	0.35619	0.48623	1.49484	5.42755
31	0.93020	0.99991	1.16939	1.74823	0.34630	0.47273	1.45333	5.37665
32	0.90544	0.97665	1.14162	1.70066	0.33698	0.46001	1.41422	5.32829
33	0.88206	0.95474	1.11548	1.65656	0.32820	0.44803	1.37737	5.28253
34	0.85994	0.93406	1.09082	1.61564	0.31993	0.43674	1.34267	5.23938
35	0.83896	0.91452	1.06751	1.57764	0.31214	0.42611	1.30999	5.19892
36	0.81904	0.89600	1.04544	1.54236	0.30481	0.41610	1.27923	5.16121
37	0.80008	0.87844	1.02451	1.50956	0.29792	0.40669	1.25029	5.12629
38	0.78201	0.86175	1.00463	1.47908	0.29143	0.39784	1.22309	5.09418
39	0.76477	0.84587	0.98571	1.45074	0.28534	0.38953	1.19753	5.06492
40	0.74828	0.83073	0.96770	1.42439	0.27963	0.38172	1.17353	5.03848
41	0.73250	0.81629	0.95051	1.39989	0.27426	0.37440	1.15103	5.01486
42	0.71738	0.80249	0.93410	1.37712	0.26924	0.36755	1.12996	4.99396
43	0.70286	0.78928	0.91840	1.35597	0.26455	0.36113	1.11024	4.97562
44	0.68891	0.77664	0.90337	1.33634	0.26016	0.35515	1.09183	4.95978
45	0.67549	0.76451	0.88897	1.31814	0.25607	0.34957	1.07468	4.94618
46	0.66257	0.75287	0.87515	1.30128	0.25227	0.34437	1.05872	4.93458
47	0.65010	0.74169	0.86187	1.28569	0.24874	0.33956	1.04392	4.92464
48	0.63814	0.73088	0.84905	1.27130	0.24548	0.33511	1.03023	4.91594
49	0.63561	0.72829	0.84599	1.25811	0.24247	0.33100	1.01761	4.91594
50	0.63323	0.72585	0.84312	1.24619	0.23972	0.32724	1.00604	4.91594
51	0.63098	0.72354	0.84041	1.23548	0.23720	0.32380	0.99547	4.91594
52	0.62886	0.72137	0.83785	1.22591	0.23491	0.32068	0.98588	4.91594
53	0.62685	0.71932	0.83544	1.21746	0.23285	0.31787	0.97724	4.91594
54	0.62495	0.71738	0.83315	1.21008	0.23102	0.31536	0.96953	4.91594
55	0.62316	0.71554	0.83099	1.20372	0.22940	0.31315	0.96273	4.91594
56	0.63846	0.73074	0.84950	1.19838	0.22799	0.31123	0.95682	5.02672
57	0.65385	0.74603	0.86811	1.19401	0.22679	0.30959	0.95178	5.13750
58	0.66932	0.76140	0.88682	1.19061	0.22579	0.30823	0.94760	5.24828
59	0.68486	0.77685	0.90563	1.18815	0.22500	0.30715	0.94427	5.35906
60	0.70048	0.79238	0.92452	1.18664	0.22440	0.30634	0.94178	5.46984
61	0.71616	0.80797	0.94349	1.18606	0.22401	0.30580	0.94013	5.58062
62	0.73191	0.82362	0.96253	1.18642	0.22381	0.30553	0.93930	5.69140
63	0.74771	0.83934	0.98165	1.18773	0.22381	0.30553	0.93930	5.80218
64	0.76357	0.85511	1.00082	1.18999	0.22401	0.30580	0.94013	5.91296
65	0.77948	0.87093	1.02007	1.19322	0.22441	0.30634	0.94178	6.02374

Hardin 2006 Time Period 2 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	54.46208	56.53688	65.75253	76.94553	4.33945	4.81218	34.22868	188.55600
4	42.68652	44.50688	51.73729	70.30185	3.99930	4.43497	31.54562	150.37753
5	35.62119	37.28889	43.32820	64.37317	3.69252	4.09477	29.12584	122.82175
6	30.91096	32.47691	37.72214	59.07442	3.41548	3.78755	26.94061	102.48778
7	27.54651	29.03979	33.71779	54.33115	3.16499	3.50977	24.96477	87.17693
8	25.02319	26.46193	30.71455	50.07881	2.93820	3.25828	23.17595	75.43274
9	23.06058	24.45695	28.37871	46.26091	2.73264	3.03033	21.55452	66.26947
10	21.49055	22.85297	26.51001	42.82823	2.54609	2.82345	20.08304	59.00536
11	20.20592	21.54060	24.98108	39.73759	2.37660	2.63550	18.74609	53.16040
12	19.13542	20.44698	23.70699	36.95119	2.22243	2.46453	17.53003	48.39014
13	18.22961	19.52159	22.62889	34.43590	2.08204	2.30885	16.42273	44.44357
14	17.45320	18.72841	21.70482	32.16238	1.95408	2.16695	15.41339	41.13501
15	16.78033	18.04099	20.90393	30.10524	1.83732	2.03747	14.49243	38.32509
16	16.19156	17.43950	20.20317	28.24165	1.73069	1.91922	13.65133	35.90831
17	15.67206	16.90877	19.58487	26.55183	1.63321	1.81113	12.88246	33.80363
18	15.21028	16.43701	19.03526	25.01810	1.54404	1.71224	12.17905	31.94870
19	14.79710	16.01491	18.54350	23.62482	1.46238	1.62169	11.53500	30.29483
20	14.17977	15.41848	17.85472	22.35834	1.38758	1.53873	10.94494	28.80426
21	13.38881	14.62453	16.93930	21.20630	1.31899	1.46268	10.40396	27.44739
22	12.66974	13.90275	16.10712	20.15796	1.25608	1.39292	9.90774	26.20128
23	12.01320	13.24373	15.34728	19.20363	1.19835	1.32890	9.45238	25.04797
24	11.41138	12.63963	14.65075	18.33476	1.14536	1.27013	9.03438	23.97357
25	10.85771	12.08386	14.00996	17.54378	1.09670	1.21618	8.65058	22.96774
26	10.34662	11.57084	13.41845	16.82390	1.05203	1.16663	8.29818	22.02228
27	9.87339	11.09582	12.87076	16.16908	1.01101	1.12115	7.97464	21.13123
28	9.43396	10.65473	12.36218	15.57396	0.97336	1.07940	7.67767	20.29005
29	9.02484	10.24406	11.88868	15.03380	0.93882	1.04109	7.40523	19.49568
30	8.64299	9.86077	11.44675	14.54432	0.90716	1.00598	7.15547	18.74583
31	8.28578	9.50221	11.03333	14.10176	0.87816	0.97382	6.92672	18.03865
32	7.95089	9.16606	10.64575	13.70280	0.85163	0.94441	6.71750	17.37286
33	7.63630	8.85028	10.28166	13.34445	0.82741	0.91755	6.52647	16.74794
34	7.34022	8.55307	9.93899	13.02409	0.80535	0.89308	6.35242	16.16260
35	7.06105	8.27285	9.61589	12.73941	0.78530	0.87085	6.19427	15.61660
36	6.79739	8.00820	9.31075	12.48839	0.76714	0.85072	6.05108	15.10867
37	6.54799	7.75785	9.02210	12.26929	0.75077	0.83256	5.92195	14.63862
38	6.31171	7.52068	8.74864	12.08059	0.73609	0.81628	5.80614	14.20497
39	6.08755	7.29567	8.48921	11.92097	0.72301	0.80177	5.70296	13.80676
40	5.87460	7.08191	8.24275	11.78938	0.71146	0.78896	5.61182	13.44274
41	5.67203	6.87858	8.00831	11.68493	0.70136	0.77777	5.53220	13.11143
42	5.47911	6.68493	7.78503	11.60690	0.69267	0.76813	5.46364	12.81076
43	5.29516	6.50029	7.57214	11.55479	0.68533	0.75999	5.40576	12.53887
44	5.11958	6.32404	7.36893	11.52824	0.67931	0.75331	5.35824	12.29303
45	4.95180	6.15563	7.17475	11.52709	0.67456	0.74805	5.32081	12.07069
46	4.79131	5.99454	6.98900	11.55132	0.67107	0.74418	5.29327	11.86864
47	4.63765	5.84030	6.81117	11.60110	0.66881	0.74167	5.27546	11.68291
48	4.49040	5.69248	6.64075	11.67675	0.66778	0.74052	5.26729	11.50958
49	4.49040	5.69248	6.64075	11.77879	0.66796	0.74072	5.26871	11.50958
50	4.49040	5.69248	6.64075	11.90787	0.66936	0.74227	5.27973	11.50958
51	4.49040	5.69248	6.64075	12.06489	0.67198	0.74518	5.30041	11.50958
52	4.49040	5.69248	6.64075	12.25091	0.67584	0.74946	5.33088	11.50958
53	4.49040	5.69248	6.64075	12.46717	0.68096	0.75514	5.37128	11.50958
54	4.49040	5.69248	6.64075	12.71523	0.68737	0.76225	5.42184	11.50958
55	4.49040	5.69248	6.64075	12.99675	0.69511	0.77083	5.48286	11.50958
56	4.91926	6.21038	7.25195	13.31378	0.70421	0.78092	5.55465	14.28142
57	5.34813	6.72828	7.86316	13.66858	0.71473	0.79259	5.63764	17.05324
58	5.77701	7.24619	8.47437	14.06373	0.72673	0.80590	5.73229	19.82506
59	6.20587	7.76409	9.08559	14.50219	0.74028	0.82092	5.83915	22.59689
60	6.63474	8.28199	9.69680	14.98724	0.75545	0.83775	5.95884	25.36873
61	7.06362	8.79989	10.30801	15.52264	0.77234	0.85648	6.09206	28.14058
62	7.49248	9.31779	10.91922	16.11255	0.79105	0.87722	6.23960	30.91238
63	7.92136	9.83570	11.53044	16.76173	0.81168	0.90010	6.40235	33.68425
64	8.35023	10.35360	12.14165	17.47548	0.83437	0.92526	6.58132	36.45607
65	8.77909	10.87150	12.75286	18.25969	0.85925	0.95286	6.77762	39.22791

Hardin 2006 Time Period 2 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	1.77207	1.90157	2.36795	3.45186	1.84889	2.08304	12.70215	0.82775
4	1.61973	1.73809	2.16437	3.48758	1.77102	1.99530	12.16717	0.79173
5	1.52832	1.64001	2.04223	3.52330	1.69884	1.91398	11.67128	0.76184
6	1.46738	1.57461	1.96080	3.55902	1.63192	1.83858	11.21151	0.73761
7	1.42385	1.52791	1.90263	3.59474	1.56986	1.76867	10.78516	0.71858
8	1.39121	1.49287	1.85901	3.63046	1.51231	1.70383	10.38976	0.70432
9	1.36581	1.46563	1.82508	3.66618	1.45893	1.64369	10.02309	0.69442
10	1.34550	1.44383	1.79794	3.70190	1.40944	1.58794	9.68309	0.68845
11	1.32888	1.42599	1.77573	3.73762	1.36357	1.53625	9.36792	0.68605
12	1.31503	1.41113	1.75722	3.77334	1.32106	1.48836	9.07589	0.68683
13	1.30331	1.39856	1.74156	3.80906	1.28170	1.44401	8.80545	0.69044
14	1.29327	1.38778	1.72814	3.84478	1.24528	1.40298	8.55521	0.69655
15	1.28456	1.37844	1.71651	3.88050	1.21160	1.36504	8.32390	0.70483
16	1.27695	1.37027	1.70633	3.91622	1.18052	1.33002	8.11035	0.71498
17	1.27022	1.36305	1.69735	3.95194	1.15187	1.29774	7.91351	0.72671
18	1.26425	1.35664	1.68937	3.98766	1.12551	1.26804	7.73241	0.73974
19	1.25891	1.35091	1.68222	4.02338	1.10132	1.24079	7.56619	0.75383
20	1.26170	1.34286	1.67225	4.05910	1.07917	1.21584	7.41407	0.76873
21	1.26979	1.34525	1.67526	4.09482	1.05898	1.19309	7.27534	0.78422
22	1.27715	1.34743	1.67799	4.13054	1.04064	1.17243	7.14934	0.80010
23	1.28387	1.34941	1.68048	4.16626	1.02407	1.15376	7.03552	0.81617
24	1.29003	1.35123	1.68277	4.20198	1.00920	1.13700	6.93333	0.83226
25	1.29570	1.35290	1.68487	4.23770	0.99595	1.12208	6.84235	0.84822
26	1.30093	1.35444	1.68681	4.27342	0.98428	1.10893	6.76215	0.86391
27	1.30578	1.35588	1.68861	4.30914	0.97413	1.09749	6.69239	0.87920
28	1.31027	1.35720	1.69028	4.34486	0.96545	1.08771	6.63276	0.89398
29	1.31446	1.35844	1.69183	4.38058	0.95821	1.07955	6.58300	0.90817
30	1.31837	1.35959	1.69328	4.41630	0.95237	1.07298	6.54290	0.92169
31	1.32203	1.36067	1.69464	4.45202	0.94791	1.06796	6.51229	0.93449
32	1.32545	1.36169	1.69591	4.48774	0.94482	1.06447	6.49103	0.94652
33	1.32867	1.36264	1.69710	4.52346	0.94307	1.06250	6.47903	0.95775
34	1.33170	1.36353	1.69823	4.55918	0.94267	1.06205	6.47624	0.96819
35	1.33456	1.36438	1.69929	4.59490	0.94360	1.06310	6.48266	0.97783
36	1.33726	1.36517	1.70029	4.63062	0.94588	1.06566	6.49830	0.98671
37	1.33981	1.36592	1.70123	4.66634	0.94951	1.06975	6.52324	0.99486
38	1.34223	1.36664	1.70213	4.70206	0.95450	1.07538	6.55758	1.00234
39	1.34453	1.36732	1.70298	4.73778	0.96089	1.08258	6.60146	1.00924
40	1.34671	1.36796	1.70379	4.77350	0.96870	1.09137	6.65508	1.01563
41	1.34878	1.36857	1.70456	4.80922	0.97795	1.10180	6.71867	1.02162
42	1.35075	1.36916	1.70529	4.84495	0.98870	1.11391	6.79251	1.02735
43	1.35264	1.36971	1.70599	4.88066	1.00099	1.12775	6.87692	1.03294
44	1.35443	1.37024	1.70666	4.91639	1.01487	1.14339	6.97227	1.03857
45	1.35615	1.37075	1.70730	4.95210	1.03040	1.16089	7.07898	1.04439
46	1.35779	1.37123	1.70791	4.98783	1.04766	1.18033	7.19755	1.05060
47	1.35937	1.37170	1.70849	5.02355	1.06672	1.20181	7.32850	1.05741
48	1.36088	1.37214	1.70905	5.05927	1.08767	1.22541	7.47243	1.06504
49	1.40092	1.42371	1.77330	5.09498	1.11061	1.25125	7.63003	1.09972
50	1.44096	1.47527	1.83755	5.13071	1.13564	1.27946	7.80201	1.13440
51	1.48100	1.52683	1.90181	5.16643	1.16289	1.31016	7.98920	1.16908
52	1.52104	1.57840	1.96606	5.20215	1.19248	1.34350	8.19252	1.20376
53	1.56109	1.62996	2.03031	5.23787	1.22456	1.37964	8.41294	1.23844
54	1.60113	1.68153	2.09456	5.27358	1.25930	1.41878	8.65156	1.27312
55	1.64117	1.73309	2.15882	5.30931	1.29686	1.46109	8.90962	1.30780
56	1.68122	1.78466	2.22307	5.34503	1.33744	1.50681	9.18838	1.34248
57	1.72126	1.83622	2.28732	5.38075	1.38124	1.55617	9.48936	1.37716
58	1.76130	1.88778	2.35157	5.41646	1.42852	1.60942	9.81410	1.41184
59	1.80135	1.93935	2.41582	5.45219	1.47950	1.66687	10.16439	1.44652
60	1.84139	1.99091	2.48008	5.48791	1.53449	1.72881	10.54215	1.48120
61	1.88143	2.04248	2.54433	5.52363	1.59378	1.79561	10.94946	1.51588
62	1.92147	2.09404	2.60858	5.55935	1.65771	1.86764	11.38869	1.55057
63	1.96152	2.14560	2.67284	5.59507	1.72665	1.94532	11.86237	1.58525
64	2.00156	2.19717	2.73709	5.63079	1.80102	2.02911	12.37331	1.61992
65	2.04160	2.24873	2.80134	5.66651	1.88127	2.11951	12.92458	1.65461

Hardin 2006 Time Period 3 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	7.30726	7.67058	9.10743	12.08987	1.06253	1.45048	4.45924	16.29315
4	5.17030	5.42710	6.43927	9.44067	1.00877	1.37709	4.23362	14.04703
5	4.03761	4.23459	5.02040	7.95081	0.95858	1.30857	4.02296	12.38344
6	3.34478	3.50357	4.15032	6.95262	0.91168	1.24455	3.82614	11.12777
7	2.88040	3.01275	3.56599	6.21098	0.86784	1.18470	3.64216	10.16361
8	2.60853	2.71577	3.21088	5.71941	0.82684	1.12873	3.47008	9.41162
9	2.40043	2.48893	2.93974	5.29934	0.78847	1.07635	3.30904	8.81670
10	2.23093	2.30572	2.72100	4.92644	0.75254	1.02730	3.15825	8.33976
11	2.08952	2.15424	2.54039	4.59309	0.71888	0.98135	3.01698	7.95265
12	1.96918	2.02657	2.38838	4.29345	0.68733	0.93828	2.88457	7.63471
13	1.86503	1.91720	2.25835	4.02291	0.65774	0.89789	2.76040	7.37059
14	1.77362	1.82221	2.14561	3.77771	0.62998	0.86000	2.64390	7.14867
15	1.69238	1.73873	2.04668	3.55475	0.60393	0.82443	2.53455	6.96010
16	1.61943	1.66461	1.95899	3.35141	0.57946	0.79103	2.43186	6.79803
17	1.55328	1.59818	1.88055	3.16546	0.55647	0.75964	2.33538	6.65709
18	1.49282	1.53816	1.80982	2.99499	0.53486	0.73015	2.24471	6.53308
19	1.43714	1.48356	1.74557	2.83831	0.51455	0.70242	2.15946	6.42267
20	1.37569	1.42516	1.67648	2.69974	0.49544	0.67634	2.07927	6.32322
21	1.31913	1.37070	1.61129	2.58086	0.47747	0.65179	2.00382	6.23266
22	1.26752	1.32110	1.55193	2.47195	0.46055	0.62870	1.93282	6.14932
23	1.22020	1.27573	1.49763	2.37204	0.44462	0.60695	1.86596	6.07191
24	1.17664	1.23404	1.44777	2.28026	0.42962	0.58647	1.80301	5.99942
25	1.13640	1.19562	1.40182	2.19582	0.41549	0.56719	1.74372	5.93109
26	1.09907	1.16006	1.35931	2.11805	0.40218	0.54902	1.68785	5.86634
27	1.06435	1.12706	1.31987	2.04634	0.38964	0.53190	1.63522	5.80476
28	1.03196	1.09635	1.28317	1.98013	0.37782	0.51576	1.58562	5.74606
29	1.00164	1.06768	1.24893	1.91895	0.36668	0.50056	1.53889	5.69006
30	0.97320	1.04086	1.21690	1.86234	0.35619	0.48623	1.49484	5.63664
31	0.94646	1.01570	1.18687	1.80992	0.34630	0.47273	1.45333	5.58578
32	0.92124	0.99205	1.15864	1.76134	0.33698	0.46001	1.41422	5.53745
33	0.89742	0.96976	1.13206	1.71628	0.32820	0.44803	1.37737	5.49172
34	0.87488	0.94873	1.10698	1.67445	0.31993	0.43674	1.34267	5.44860
35	0.85349	0.92884	1.08327	1.63560	0.31214	0.42611	1.30999	5.40818
36	0.83318	0.91000	1.06082	1.59949	0.30481	0.41610	1.27923	5.37050
37	0.81384	0.89212	1.03953	1.56592	0.29792	0.40669	1.25029	5.33560
38	0.79540	0.87512	1.01929	1.53469	0.29143	0.39784	1.22309	5.30352
39	0.77780	0.85895	1.00004	1.50564	0.28534	0.38953	1.19753	5.27428
40	0.76096	0.84353	0.98170	1.47862	0.27963	0.38172	1.17353	5.24786
41	0.74485	0.82881	0.96420	1.45347	0.27426	0.37440	1.15103	5.22425
42	0.72939	0.81475	0.94748	1.43008	0.26924	0.36755	1.12996	5.20336
43	0.71455	0.80129	0.93149	1.40834	0.26455	0.36113	1.11024	5.18504
44	0.70028	0.78839	0.91618	1.38813	0.26016	0.35515	1.09183	5.16921
45	0.68655	0.77602	0.90150	1.36938	0.25607	0.34957	1.07468	5.15562
46	0.67333	0.76415	0.88741	1.35199	0.25227	0.34437	1.05872	5.14403
47	0.66057	0.75273	0.87387	1.33589	0.24874	0.33956	1.04392	5.13410
48	0.64832	0.74170	0.86078	1.32101	0.24548	0.33511	1.03023	5.12541
49	0.64554	0.73886	0.85742	1.30731	0.24247	0.33100	1.01761	5.12541
50	0.64293	0.73618	0.85426	1.29491	0.23972	0.32724	1.00604	5.12541
51	0.64046	0.73365	0.85129	1.28374	0.23720	0.32380	0.99547	5.12541
52	0.63814	0.73127	0.84848	1.27376	0.23491	0.32068	0.98588	5.12541
53	0.63594	0.72902	0.84582	1.26492	0.23285	0.31787	0.97724	5.12541
54	0.63386	0.72689	0.84331	1.25717	0.23102	0.31536	0.96953	5.12541
55	0.63189	0.72487	0.84094	1.25047	0.22940	0.31315	0.96273	5.12541
56	0.64703	0.73991	0.85925	1.24480	0.22799	0.31123	0.95682	5.23611
57	0.66226	0.75504	0.87767	1.24014	0.22679	0.30959	0.95178	5.34681
58	0.67759	0.77027	0.89621	1.23646	0.22579	0.30823	0.94760	5.45751
59	0.69299	0.78558	0.91484	1.23375	0.22500	0.30715	0.94427	5.56821
60	0.70848	0.80097	0.93357	1.23200	0.22440	0.30634	0.94178	5.67890
61	0.72403	0.81644	0.95239	1.23120	0.22401	0.30580	0.94013	5.78960
62	0.73966	0.83197	0.97129	1.23136	0.22381	0.30553	0.93930	5.90030
63	0.75535	0.84757	0.99027	1.23248	0.22381	0.30553	0.93930	6.01100
64	0.77110	0.86323	1.00932	1.23457	0.22401	0.30580	0.94013	6.12170
65	0.78690	0.87895	1.02844	1.23765	0.22441	0.30634	0.94178	6.23240

Hardin 2006 Time Period 3 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	54.46301	56.54123						
65.75790	77.78844	4.33945						
4.81218	34.22868	193.24347						
4	42.68723	44.51013	51.74132	71.07202	3.99930	4.43497	31.54562	154.11584
5	35.62175	37.29149	43.33142	65.07848	3.69252	4.09477	29.12584	125.87506
6	30.91144	32.47906	37.72481	59.72160	3.41548	3.78755	26.94061	105.03563
7	27.54691	29.04164	33.72008	54.92639	3.16499	3.50977	24.96477	89.34409
8	25.02356	26.46355	30.71655	50.62746	2.93820	3.25828	23.17595	77.30797
9	23.06090	24.45839	28.38049	46.76775	2.73264	3.03033	21.55452	67.91690
10	21.49084	22.85425	26.51161	43.29747	2.54609	2.82345	20.08304	60.47223
11	20.20618	21.54176	24.98253	40.17297	2.37660	2.63550	18.74609	54.48193
12	19.13567	20.44804	23.70831	37.35603	2.22243	2.46453	17.53003	49.59314
13	18.22984	19.52258	22.63011	34.81313	2.08204	2.30885	16.42273	45.54843
14	17.45341	18.72932	21.70595	32.51477	1.95408	2.16695	15.41339	42.15762
15	16.78053	18.04184	20.90500	30.43507	1.83732	2.03747	14.49243	39.27786
16	16.19174	17.44029	20.20416	28.55106	1.73069	1.91922	13.65133	36.80101
17	15.67224	16.90952	19.58580	26.84274	1.63321	1.81113	12.88246	34.64398
18	15.21045	16.43771	19.03613	25.29218	1.54404	1.71224	12.17905	32.74294
19	14.79726	16.01558	18.54434	23.88364	1.46238	1.62169	11.53500	31.04796
20	14.17992	15.41913	17.85551	22.60329	1.38758	1.53873	10.94494	29.52031
21	13.38895	14.62516	16.94008	21.43864	1.31899	1.46268	10.40396	28.12971
22	12.66988	13.90336	16.10788	20.37880	1.25608	1.39292	9.90774	26.85266
23	12.01334	13.24434	15.34804	19.41400	1.19835	1.32890	9.45238	25.67064
24	11.41152	12.64022	14.65150	18.53564	1.14536	1.27013	9.03438	24.56956
25	10.85784	12.08444	14.01068	17.73598	1.09670	1.21618	8.65058	23.53873
26	10.34674	11.57141	13.41916	17.00821	1.05203	1.16663	8.29818	22.56975
27	9.87351	11.09639	12.87146	16.34622	1.01101	1.12115	7.97464	21.65652
28	9.43408	10.65529	12.36288	15.74458	0.97336	1.07940	7.67767	20.79446
29	9.02496	10.24461	11.88937	15.19850	0.93882	1.04109	7.40523	19.98033
30	8.64311	9.86131	11.44743	14.70366	0.90716	1.00598	7.15547	19.21184
31	8.28589	9.50275	11.03400	14.25626	0.87816	0.97382	6.92672	18.48708
32	7.95100	9.16659	10.64641	13.85292	0.85163	0.94441	6.71750	17.80475
33	7.63641	8.85080	10.28231	13.49064	0.82741	0.91755	6.52647	17.16429
34	7.34033	8.55359	9.93963	13.16677	0.80535	0.89308	6.35242	16.56439
35	7.06116	8.27337	9.61653	12.87897	0.78530	0.87085	6.19427	16.00482
36	6.79750	8.00871	9.31138	12.62521	0.76714	0.85072	6.05108	15.48427
37	6.54809	7.75836	9.02273	12.40371	0.75077	0.83256	5.92195	15.00253
38	6.31181	7.52118	8.74927	12.21294	0.73609	0.81628	5.80614	14.55810
39	6.08765	7.29617	8.48982	12.05157	0.72301	0.80177	5.70296	14.14999
40	5.87470	7.08241	8.24336	11.91855	0.71146	0.78896	5.61182	13.77692
41	5.67213	6.87907	8.00892	11.81294	0.70136	0.77777	5.53220	13.43738
42	5.47921	6.68542	7.78563	11.73406	0.69267	0.76813	5.46364	13.12923
43	5.29526	6.50077	7.57274	11.68138	0.68533	0.75999	5.40576	12.85058
44	5.11967	6.32452	7.36952	11.65454	0.67931	0.75331	5.35824	12.59863
45	4.95189	6.15610	7.17534	11.65338	0.67456	0.74805	5.32081	12.37077
46	4.79140	5.99501	6.98959	11.67787	0.67107	0.74418	5.29327	12.16369
47	4.63774	5.84076	6.81175	11.72819	0.66881	0.74167	5.27546	11.97334
48	4.49049	5.69295	6.64133	11.80468	0.66778	0.74052	5.26729	11.79571
49	4.49049	5.69295	6.64133	11.90783	0.66796	0.74072	5.26871	11.79571
50	4.49049	5.69295	6.64133	12.03833	0.66936	0.74227	5.27973	11.79571
51	4.49049	5.69295	6.64133	12.19707	0.67198	0.74518	5.30041	11.79571
52	4.49049	5.69295	6.64133	12.38513	0.67584	0.74946	5.33088	11.79571
53	4.49049	5.69295	6.64133	12.60376	0.68096	0.75514	5.37128	11.79571
54	4.49049	5.69295	6.64133	12.85453	0.68737	0.76225	5.42184	11.79571
55	4.49049	5.69295	6.64133	13.13914	0.69511	0.77083	5.48286	11.79571
56	4.91938	6.21095	7.25266	13.45965	0.70421	0.78092	5.55465	14.63645
57	5.34826	6.72895	7.86399	13.81832	0.71473	0.79259	5.63764	17.47717
58	5.77716	7.24695	8.47533	14.21781	0.72673	0.80590	5.73229	20.31790
59	6.20604	7.76496	9.08667	14.66107	0.74028	0.82092	5.83915	23.15866
60	6.63493	8.28296	9.69800	15.15144	0.75545	0.83775	5.95884	25.99940
61	7.06382	8.80096	10.30934	15.69270	0.77234	0.85648	6.09206	28.84015
62	7.49271	9.31897	10.92068	16.28908	0.79105	0.87722	6.23960	31.68088
63	7.92160	9.83697	11.53201	16.94537	0.81168	0.90010	6.40235	34.52164
64	8.35049	10.35497	12.14335	17.66695	0.83437	0.92526	6.58132	37.36238
65	8.77937	10.87297	12.75469	18.45973	0.85925	0.95286	6.77762	40.20313

Hardin 2006 Time Period 3 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	1.77497	1.90464	2.37179	3.45631	1.84889	2.08304	12.70215	0.81913
4	1.62238	1.74089	2.16788	3.49208	1.77102	1.99530	12.16717	0.78349
5	1.53082	1.64265	2.04554	3.52784	1.69884	1.91398	11.67128	0.75391
6	1.46978	1.57715	1.96398	3.56361	1.63192	1.83858	11.21151	0.72993
7	1.42618	1.53037	1.90572	3.59937	1.56986	1.76867	10.78516	0.71110
8	1.39348	1.49528	1.86203	3.63514	1.51231	1.70383	10.38976	0.69700
9	1.36805	1.46799	1.82804	3.67090	1.45893	1.64369	10.02309	0.68719
10	1.34770	1.44616	1.80085	3.70667	1.40944	1.58794	9.68309	0.68129
11	1.33106	1.42829	1.77861	3.74244	1.36357	1.53625	9.36792	0.67891
12	1.31718	1.41341	1.76007	3.77821	1.32106	1.48836	9.07589	0.67968
13	1.30544	1.40081	1.74439	3.81397	1.28170	1.44401	8.80545	0.68326
14	1.29539	1.39002	1.73094	3.84974	1.24528	1.40298	8.55521	0.68930
15	1.28666	1.38066	1.71929	3.88550	1.21160	1.36504	8.32390	0.69750
16	1.27903	1.37247	1.70910	3.92127	1.18052	1.33002	8.11035	0.70754
17	1.27230	1.36525	1.70010	3.95703	1.15187	1.29774	7.91351	0.71914
18	1.26632	1.35883	1.69211	3.99280	1.12551	1.26804	7.73241	0.73204
19	1.26096	1.35308	1.68495	4.02857	1.10132	1.24079	7.56619	0.74598
20	1.26376	1.34502	1.67497	4.06433	1.07917	1.21584	7.41407	0.76073
21	1.27187	1.34742	1.67797	4.10010	1.05898	1.19309	7.27534	0.77606
22	1.27924	1.34959	1.68071	4.13586	1.04064	1.17243	7.14934	0.79177
23	1.28597	1.35158	1.68321	4.17163	1.02407	1.15376	7.03552	0.80768
24	1.29214	1.35340	1.68549	4.20740	1.00920	1.13700	6.93333	0.82360
25	1.29782	1.35508	1.68760	4.24316	0.99595	1.12208	6.84235	0.83940
26	1.30306	1.35662	1.68954	4.27893	0.98428	1.10893	6.76215	0.85492
27	1.30791	1.35806	1.69134	4.31470	0.97413	1.09749	6.69239	0.87005
28	1.31242	1.35939	1.69301	4.35046	0.96545	1.08771	6.63276	0.88468
29	1.31661	1.36062	1.69457	4.38623	0.95821	1.07955	6.58300	0.89872
30	1.32053	1.36178	1.69602	4.42199	0.95237	1.07298	6.54290	0.91210
31	1.32419	1.36286	1.69738	4.45776	0.94791	1.06796	6.51229	0.92476
32	1.32762	1.36387	1.69865	4.49353	0.94482	1.06447	6.49103	0.93667
33	1.33085	1.36483	1.69985	4.52929	0.94307	1.06250	6.47903	0.94779
34	1.33388	1.36572	1.70098	4.56506	0.94267	1.06205	6.47624	0.95811
35	1.33674	1.36657	1.70204	4.60083	0.94360	1.06310	6.48266	0.96766
36	1.33945	1.36737	1.70304	4.63659	0.94588	1.06566	6.49830	0.97644
37	1.34201	1.36812	1.70399	4.67235	0.94951	1.06975	6.52324	0.98451
38	1.34443	1.36883	1.70489	4.70812	0.95450	1.07538	6.55758	0.99191
39	1.34673	1.36951	1.70574	4.74389	0.96089	1.08258	6.60146	0.99874
40	1.34891	1.37016	1.70655	4.77966	0.96870	1.09137	6.65508	1.00506
41	1.35098	1.37077	1.70732	4.81542	0.97795	1.10180	6.71867	1.01099
42	1.35296	1.37136	1.70805	4.85119	0.98870	1.11391	6.79251	1.01666
43	1.35485	1.37191	1.70875	4.88695	1.00099	1.12775	6.87692	1.02219
44	1.35665	1.37244	1.70942	4.92272	1.01487	1.14339	6.97227	1.02776
45	1.35837	1.37295	1.71006	4.95849	1.03040	1.16089	7.07898	1.03352
46	1.36001	1.37344	1.71067	4.99426	1.04766	1.18033	7.19755	1.03967
47	1.36159	1.37390	1.71126	5.03002	1.06672	1.20181	7.32850	1.04641
48	1.36310	1.37435	1.71181	5.06579	1.08767	1.22541	7.47243	1.05396
49	1.40321	1.42599	1.77617	5.10155	1.11061	1.25125	7.63003	1.08828
50	1.44331	1.47764	1.84053	5.13732	1.13564	1.27946	7.80201	1.12260
51	1.48342	1.52929	1.90488	5.17308	1.16289	1.31016	7.98920	1.15692
52	1.52353	1.58093	1.96924	5.20885	1.19248	1.34350	8.19252	1.19124
53	1.56364	1.63258	2.03359	5.24461	1.22456	1.37964	8.41294	1.22556
54	1.60375	1.68423	2.09795	5.28038	1.25930	1.41878	8.65156	1.25988
55	1.64386	1.73587	2.16231	5.31615	1.29686	1.46109	8.90962	1.29420
56	1.68397	1.78752	2.22666	5.35191	1.33744	1.50681	9.18838	1.32852
57	1.72407	1.83917	2.29102	5.38768	1.38124	1.55617	9.48936	1.36284
58	1.76418	1.89081	2.35537	5.42345	1.42852	1.60942	9.81410	1.39715
59	1.80429	1.94246	2.41973	5.45921	1.47950	1.66687	10.16439	1.43147
60	1.84440	1.99411	2.48408	5.49498	1.53449	1.72881	10.54215	1.46579
61	1.88451	2.04575	2.54844	5.53075	1.59378	1.79561	10.94946	1.50011
62	1.92462	2.09740	2.61280	5.56651	1.65771	1.86764	11.38869	1.53443
63	1.96472	2.14905	2.67715	5.60228	1.72665	1.94532	11.86237	1.56875
64	2.00483	2.20069	2.74151	5.63804	1.80102	2.02911	12.37331	1.60307
65	2.04494	2.25234	2.80586	5.67381	1.88127	2.11951	12.92458	1.63739

Hardin 2006 Time Period 4 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	5.78689	6.44428	7.63770	9.06585	1.06253	1.45048	4.45924	14.47387
4	4.24264	4.72539	5.60230	7.46958	1.00877	1.37709	4.23362	12.20282
5	3.39472	3.77474	4.47531	6.48570	0.95858	1.30857	4.02296	10.52079
6	2.86220	3.17458	3.76326	5.77377	0.91168	1.24455	3.82614	9.25119
7	2.49787	2.76237	3.27389	5.21235	0.86784	1.18470	3.64216	8.27633
8	2.26495	2.49438	2.95396	4.79640	0.82684	1.12873	3.47008	7.51601
9	2.08578	2.28727	2.70683	4.43318	0.78847	1.07635	3.30904	6.91449
10	1.94106	2.11951	2.50697	4.10856	0.75254	1.02730	3.15825	6.43226
11	1.82140	1.98036	2.34148	3.81710	0.71888	0.98135	3.01698	6.04086
12	1.72053	1.86269	2.20177	3.55443	0.68733	0.93828	2.88457	5.71939
13	1.63412	1.76152	2.08189	3.31699	0.65774	0.89789	2.76040	5.45234
14	1.55907	1.67332	1.97759	3.10178	0.62998	0.86000	2.64390	5.22797
15	1.49311	1.59550	1.88575	2.90626	0.60393	0.82443	2.53455	5.03731
16	1.43452	1.52612	1.80403	2.72825	0.57946	0.79103	2.43186	4.87344
17	1.38202	1.46367	1.73066	2.56584	0.55647	0.75964	2.33538	4.73093
18	1.33459	1.40702	1.66424	2.41740	0.53486	0.73015	2.24471	4.60554
19	1.29142	1.35524	1.60367	2.28147	0.51455	0.70242	2.15946	4.49391
20	1.23915	1.30001	1.53853	2.15930	0.49544	0.67634	2.07927	4.39336
21	1.18709	1.24953	1.47808	2.05101	0.47747	0.65179	2.00382	4.30179
22	1.13964	1.20356	1.42305	1.95185	0.46055	0.62870	1.93282	4.21753
23	1.09621	1.16154	1.37274	1.86093	0.44462	0.60695	1.86596	4.13926
24	1.05628	1.12295	1.32656	1.77748	0.42962	0.58647	1.80301	4.06596
25	1.01946	1.08739	1.28401	1.70079	0.41549	0.56719	1.74372	3.99688
26	0.98536	1.05451	1.24468	1.63023	0.40218	0.54902	1.68785	3.93141
27	0.95370	1.02401	1.20820	1.56526	0.38964	0.53190	1.63522	3.86915
28	0.92421	0.99564	1.17427	1.50537	0.37782	0.51576	1.58562	3.80980
29	0.89666	0.96918	1.14263	1.45012	0.36668	0.50056	1.53889	3.75318
30	0.87087	0.94443	1.11305	1.39911	0.35619	0.48623	1.49484	3.69917
31	0.84665	0.92122	1.08533	1.35196	0.34630	0.47273	1.45333	3.64774
32	0.82387	0.89943	1.05929	1.30837	0.33698	0.46001	1.41422	3.59888
33	0.80240	0.87891	1.03478	1.26804	0.32820	0.44803	1.37737	3.55264
34	0.78211	0.85955	1.01167	1.23070	0.31993	0.43674	1.34267	3.50904
35	0.76291	0.84126	0.98984	1.19612	0.31214	0.42611	1.30999	3.46817
36	0.74470	0.82394	0.96918	1.16408	0.30481	0.41610	1.27923	3.43007
37	0.72741	0.80752	0.94959	1.13439	0.29792	0.40669	1.25029	3.39478
38	0.71096	0.79192	0.93099	1.10688	0.29143	0.39784	1.22309	3.36235
39	0.69529	0.77709	0.91331	1.08139	0.28534	0.38953	1.19753	3.33278
40	0.68034	0.76296	0.89647	1.05777	0.27963	0.38172	1.17353	3.30607
41	0.66606	0.74949	0.88042	1.03590	0.27426	0.37440	1.15103	3.28220
42	0.65240	0.73662	0.86509	1.01566	0.26924	0.36755	1.12996	3.26108
43	0.63931	0.72431	0.85045	0.99694	0.26455	0.36113	1.11024	3.24256
44	0.62676	0.71254	0.83643	0.97966	0.26016	0.35515	1.09183	3.22655
45	0.61471	0.70125	0.82300	0.96372	0.25607	0.34957	1.07468	3.21281
46	0.60313	0.69042	0.81012	0.94905	0.25227	0.34437	1.05872	3.20110
47	0.59199	0.68002	0.79776	0.93558	0.24874	0.33956	1.04392	3.19105
48	0.58130	0.67001	0.78586	0.92326	0.24548	0.33511	1.03023	3.18226
49	0.57979	0.66847	0.78407	0.91214	0.24247	0.33100	1.01761	3.18226
50	0.57837	0.66702	0.78239	0.90216	0.23972	0.32724	1.00604	3.18226
51	0.57703	0.66565	0.78080	0.89326	0.23720	0.32380	0.99547	3.18226
52	0.57576	0.66435	0.77930	0.88540	0.23491	0.32068	0.98588	3.18226
53	0.57456	0.66313	0.77788	0.87854	0.23285	0.31787	0.97724	3.18226
54	0.57343	0.66197	0.77654	0.87264	0.23102	0.31536	0.96953	3.18226
55	0.57236	0.66088	0.77527	0.86768	0.22940	0.31315	0.96273	3.18226
56	0.58834	0.67678	0.79462	0.86364	0.22799	0.31123	0.95682	3.29419
57	0.60438	0.69273	0.81403	0.86050	0.22679	0.30959	0.95178	3.40612
58	0.62046	0.70874	0.83351	0.85824	0.22579	0.30823	0.94760	3.51804
59	0.63659	0.72479	0.85303	0.85685	0.22500	0.30715	0.94427	3.62997
60	0.65276	0.74088	0.87260	0.85634	0.22440	0.30634	0.94178	3.74190
61	0.66897	0.75701	0.89222	0.85669	0.22401	0.30580	0.94013	3.85382
62	0.68522	0.77318	0.91189	0.85792	0.22381	0.30553	0.93930	3.96575
63	0.70150	0.78939	0.93159	0.86003	0.22381	0.30553	0.93930	4.07768
64	0.71782	0.80563	0.95134	0.86304	0.22401	0.30580	0.94013	4.18960
65	0.73416	0.82190	0.97111	0.86696	0.22441	0.30634	0.94178	4.30153

Hardin 2006 Time Period 4 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	54.46208	56.53688	65.75253	72.25374	4.33945	4.81218	34.22868	155.92166
4	42.68652	44.50688	51.73729	66.01517	3.99930	4.43497	31.54562	124.35089
5	35.62119	37.28889	43.32820	60.44800	3.69252	4.09477	29.12584	101.56433
6	30.91096	32.47691	37.72214	55.47234	3.41548	3.78755	26.94061	84.74969
7	27.54651	29.03979	33.71779	51.01830	3.16499	3.50977	24.96477	72.08876
8	25.02319	26.46193	30.71455	47.02524	2.93820	3.25828	23.17595	62.37717
9	23.06058	24.45695	28.37871	43.44014	2.73264	3.03033	21.55452	54.79985
10	21.49055	22.85297	26.51001	40.21678	2.54609	2.82345	20.08304	48.79300
11	20.20592	21.54060	24.98108	37.31459	2.37660	2.63550	18.74609	43.95966
12	19.13542	20.44698	23.70699	34.69809	2.22243	2.46453	17.53003	40.01501
13	18.22961	19.52159	22.62889	32.33615	2.08204	2.30885	16.42273	36.75151
14	17.45320	18.72841	21.70482	30.20128	1.95408	2.16695	15.41339	34.01555
15	16.78033	18.04099	20.90393	28.26956	1.83732	2.03747	14.49243	31.69197
16	16.19156	17.43950	20.20317	26.51961	1.73069	1.91922	13.65133	29.69347
17	15.67206	16.90877	19.58487	24.93285	1.63321	1.81113	12.88246	27.95308
18	15.21028	16.43701	19.03526	23.49261	1.54404	1.71224	12.17905	26.41917
19	14.79710	16.01491	18.54350	22.18430	1.46238	1.62169	11.53500	25.05154
20	14.17977	15.41848	17.85472	20.99504	1.38758	1.53873	10.94494	23.81895
21	13.38881	14.62453	16.93930	19.91324	1.31899	1.46268	10.40396	22.69691
22	12.66974	13.90275	16.10712	18.92882	1.25608	1.39292	9.90774	21.66652
23	12.01320	13.24373	15.34728	18.03267	1.19835	1.32890	9.45238	20.71278
24	11.41138	12.63963	14.65075	17.21681	1.14536	1.27013	9.03438	19.82437
25	10.85771	12.08386	14.00996	16.47404	1.09670	1.21618	8.65058	18.99261
26	10.34662	11.57084	13.41845	15.79806	1.05203	1.16663	8.29818	18.21075
27	9.87339	11.09582	12.87076	15.18318	1.01101	1.12115	7.97464	17.47394
28	9.43396	10.65473	12.36218	14.62433	0.97336	1.07940	7.67767	16.77837
29	9.02484	10.24406	11.88868	14.11711	0.93882	1.04109	7.40523	16.12148
30	8.64299	9.86077	11.44675	13.65748	0.90716	1.00598	7.15547	15.50142
31	8.28578	9.50221	11.03333	13.24190	0.87816	0.97382	6.92672	14.91663
32	7.95089	9.16606	10.64575	12.86726	0.85163	0.94441	6.71750	14.36607
33	7.63630	8.85028	10.28166	12.53076	0.82741	0.91755	6.52647	13.84930
34	7.34022	8.55307	9.93899	12.22994	0.80535	0.89308	6.35242	13.36526
35	7.06105	8.27285	9.61589	11.96262	0.78530	0.87085	6.19427	12.91376
36	6.79739	8.00820	9.31075	11.72691	0.76714	0.85072	6.05108	12.49374
37	6.54799	7.75785	9.02210	11.52116	0.75077	0.83256	5.92195	12.10504
38	6.31171	7.52068	8.74864	11.34397	0.73609	0.81628	5.80614	11.74644
39	6.08755	7.29567	8.48921	11.19409	0.72301	0.80177	5.70296	11.41715
40	5.87460	7.08191	8.24275	11.07052	0.71146	0.78896	5.61182	11.11613
41	5.67203	6.87858	8.00831	10.97243	0.70136	0.77777	5.53220	10.84217
42	5.47911	6.68493	7.78503	10.89916	0.69267	0.76813	5.46364	10.59353
43	5.29516	6.50029	7.57214	10.85023	0.68533	0.75999	5.40576	10.36870
44	5.11958	6.32404	7.36893	10.82530	0.67931	0.75331	5.35824	10.16541
45	4.95180	6.15563	7.17475	10.82422	0.67456	0.74805	5.32081	9.98155
46	4.79131	5.99454	6.98900	10.84697	0.67107	0.74418	5.29327	9.81447
47	4.63765	5.84030	6.81117	10.89371	0.66881	0.74167	5.27546	9.66088
48	4.49040	5.69248	6.64075	10.96476	0.66778	0.74052	5.26729	9.51756
49	4.49040	5.69248	6.64075	11.06057	0.66796	0.74072	5.26871	9.51756
50	4.49040	5.69248	6.64075	11.18178	0.66936	0.74227	5.27973	9.51756
51	4.49040	5.69248	6.64075	11.32923	0.67198	0.74518	5.30041	9.51756
52	4.49040	5.69248	6.64075	11.50391	0.67584	0.74946	5.33088	9.51756
53	4.49040	5.69248	6.64075	11.70698	0.68096	0.75514	5.37128	9.51756
54	4.49040	5.69248	6.64075	11.93991	0.68737	0.76225	5.42184	9.51756
55	4.49040	5.69248	6.64075	12.20427	0.69511	0.77083	5.48286	9.51756
56	4.91926	6.21038	7.25195	12.50197	0.70421	0.78092	5.55465	11.80966
57	5.34813	6.72828	7.86316	12.83513	0.71473	0.79259	5.63764	14.10177
58	5.77701	7.24619	8.47437	13.20618	0.72673	0.80590	5.73229	16.39386
59	6.20587	7.76409	9.08559	13.61791	0.74028	0.82092	5.83915	18.68596
60	6.63474	8.28199	9.69680	14.07339	0.75545	0.83775	5.95884	20.97806
61	7.06362	8.79989	10.30801	14.57614	0.77234	0.85648	6.09206	23.27013
62	7.49248	9.31779	10.91922	15.13010	0.79105	0.87722	6.23960	25.56224
63	7.92136	9.83570	11.53044	15.73969	0.81168	0.90010	6.40235	27.85434
64	8.35023	10.35360	12.14165	16.40991	0.83437	0.92526	6.58132	30.14647
65	8.77909	10.87150	12.75286	17.14630	0.85925	0.95286	6.77762	32.43854

Hardin 2006 Time Period 4 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	1.74599	1.87404	2.33341	3.41800	1.84889	2.08304	12.70215	0.90987
4	1.59589	1.71293	2.13280	3.45337	1.77102	1.99530	12.16717	0.87028
5	1.50583	1.61626	2.01244	3.48874	1.69884	1.91398	11.67128	0.83742
6	1.44578	1.55181	1.93220	3.52411	1.63192	1.83858	11.21151	0.81079
7	1.40290	1.50578	1.87488	3.55948	1.56986	1.76867	10.78516	0.78987
8	1.37073	1.47126	1.83189	3.59485	1.51231	1.70383	10.38976	0.77420
9	1.34572	1.44441	1.79846	3.63022	1.45893	1.64369	10.02309	0.76331
10	1.32570	1.42292	1.77171	3.66559	1.40944	1.58794	9.68309	0.75676
11	1.30933	1.40535	1.74983	3.70096	1.36357	1.53625	9.36792	0.75411
12	1.29568	1.39070	1.73159	3.73633	1.32106	1.48836	9.07589	0.75497
13	1.28413	1.37831	1.71616	3.77170	1.28170	1.44401	8.80545	0.75894
14	1.27424	1.36769	1.70294	3.80706	1.24528	1.40298	8.55521	0.76566
15	1.26566	1.35848	1.69147	3.84243	1.21160	1.36504	8.32390	0.77476
16	1.25816	1.35042	1.68144	3.87780	1.18052	1.33002	8.11035	0.78591
17	1.25153	1.34332	1.67259	3.91317	1.15187	1.29774	7.91351	0.79880
18	1.24565	1.33700	1.66472	3.94854	1.12551	1.26804	7.73241	0.81313
19	1.24038	1.33134	1.65768	3.98391	1.10132	1.24079	7.56619	0.82862
20	1.24313	1.32342	1.64786	4.01929	1.07917	1.21584	7.41407	0.84500
21	1.25111	1.32578	1.65083	4.05465	1.05898	1.19309	7.27534	0.86203
22	1.25836	1.32793	1.65353	4.09002	1.04064	1.17243	7.14934	0.87948
23	1.26498	1.32989	1.65599	4.12539	1.02407	1.15376	7.03552	0.89714
24	1.27105	1.33168	1.65825	4.16076	1.00920	1.13700	6.93333	0.91483
25	1.27663	1.33333	1.66032	4.19613	0.99595	1.12208	6.84235	0.93238
26	1.28179	1.33486	1.66224	4.23150	0.98428	1.10893	6.76215	0.94962
27	1.28656	1.33627	1.66401	4.26687	0.97413	1.09749	6.69239	0.96643
28	1.29099	1.33758	1.66566	4.30224	0.96545	1.08771	6.63276	0.98268
29	1.29512	1.33881	1.66720	4.33761	0.95821	1.07955	6.58300	0.99827
30	1.29897	1.33994	1.66863	4.37298	0.95237	1.07298	6.54290	1.01314
31	1.30257	1.34101	1.66997	4.40835	0.94791	1.06796	6.51229	1.02720
32	1.30595	1.34201	1.67122	4.44372	0.94482	1.06447	6.49103	1.04042
33	1.30912	1.34295	1.67241	4.47909	0.94307	1.06250	6.47903	1.05277
34	1.31211	1.34383	1.67351	4.51446	0.94267	1.06205	6.47624	1.06424
35	1.31492	1.34467	1.67456	4.54983	0.94360	1.06310	6.48266	1.07484
36	1.31758	1.34545	1.67555	4.58520	0.94588	1.06566	6.49830	1.08460
37	1.32010	1.34620	1.67648	4.62057	0.94951	1.06975	6.52324	1.09356
38	1.32248	1.34690	1.67737	4.65594	0.95450	1.07538	6.55758	1.10179
39	1.32474	1.34757	1.67821	4.69131	0.96089	1.08258	6.60146	1.10936
40	1.32689	1.34821	1.67901	4.72668	0.96870	1.09137	6.65508	1.11639
41	1.32893	1.34881	1.67977	4.76204	0.97795	1.10180	6.71867	1.12298
42	1.33088	1.34939	1.68049	4.79742	0.98870	1.11391	6.79251	1.12927
43	1.33274	1.34994	1.68118	4.83279	1.00099	1.12775	6.87692	1.13542
44	1.33451	1.35046	1.68184	4.86816	1.01487	1.14339	6.97227	1.14161
45	1.33620	1.35096	1.68247	4.90353	1.03040	1.16089	7.07898	1.14801
46	1.33782	1.35144	1.68307	4.93890	1.04766	1.18033	7.19755	1.15484
47	1.33937	1.35190	1.68365	4.97426	1.06672	1.20181	7.32850	1.16232
48	1.34085	1.35234	1.68420	5.00964	1.08767	1.22541	7.47243	1.17071
49	1.38030	1.40316	1.74752	5.04500	1.11061	1.25125	7.63003	1.20883
50	1.41976	1.45398	1.81084	5.08038	1.13564	1.27946	7.80201	1.24695
51	1.45921	1.50480	1.87416	5.11574	1.16289	1.31016	7.98920	1.28507
52	1.49867	1.55563	1.93748	5.15112	1.19248	1.34350	8.19252	1.32319
53	1.53812	1.60645	2.00080	5.18648	1.22456	1.37964	8.41294	1.36131
54	1.57757	1.65727	2.06413	5.22185	1.25930	1.41878	8.65156	1.39943
55	1.61703	1.70809	2.12745	5.25722	1.29686	1.46109	8.90962	1.43756
56	1.65648	1.75891	2.19077	5.29259	1.33744	1.50681	9.18838	1.47568
57	1.69594	1.80974	2.25409	5.32796	1.38124	1.55617	9.48936	1.51380
58	1.73539	1.86056	2.31741	5.36333	1.42852	1.60942	9.81410	1.55192
59	1.77484	1.91138	2.38073	5.39870	1.47950	1.66687	10.16439	1.59004
60	1.81430	1.96220	2.44405	5.43407	1.53449	1.72881	10.54215	1.62816
61	1.85375	2.01302	2.50737	5.46944	1.59378	1.79561	10.94946	1.66628
62	1.89320	2.06385	2.57069	5.50481	1.65771	1.86764	11.38869	1.70440
63	1.93266	2.11467	2.63402	5.54018	1.72665	1.94532	11.86237	1.74252
64	1.97211	2.16549	2.69734	5.57555	1.80102	2.02911	12.37331	1.78064
65	2.01157	2.21631	2.76066	5.61092	1.88127	2.11951	12.92458	1.81876

Hardin 2016 Time Period 1 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HOGV	LDDV	LDDT	HDDV	MC
3	5.41545	6.04710	7.25296	8.47501	1.09745	1.48089	4.43164	14.39393
4	3.97366	4.43641	5.32559	7.01481	1.04192	1.40597	4.20742	12.12842
5	3.18266	3.54622	4.25886	6.10616	0.99008	1.33601	3.99806	10.45049
6	2.68620	2.98453	3.58508	5.44316	0.94164	1.27065	3.80247	9.18399
7	2.34670	2.59888	3.12212	4.91687	0.89636	1.20955	3.61962	8.21151
8	2.12725	2.34598	2.81663	4.52053	0.85401	1.15240	3.44860	7.45304
9	1.95867	2.15096	2.58118	4.17387	0.81438	1.09892	3.28856	6.85298
10	1.82298	1.99363	2.39153	3.86416	0.77726	1.04884	3.13870	6.37193
11	1.71120	1.86373	2.23521	3.58627	0.74250	1.00193	2.99831	5.98148
12	1.61737	1.75438	2.10387	3.33603	0.70991	0.95796	2.86672	5.66080
13	1.53734	1.66085	1.99176	3.11006	0.67935	0.91672	2.74332	5.39440
14	1.46815	1.57975	1.89474	2.90549	0.65068	0.87803	2.62754	5.17057
15	1.40764	1.50859	1.80981	2.71987	0.62377	0.84171	2.51887	4.98038
16	1.35417	1.44551	1.73470	2.55113	0.59850	0.80761	2.41681	4.81691
17	1.30651	1.38908	1.66767	2.39743	0.57475	0.77557	2.32093	4.67475
18	1.26369	1.33820	1.60737	2.25719	0.55244	0.74546	2.23082	4.54967
19	1.22494	1.29198	1.55275	2.12901	0.53146	0.71715	2.14609	4.43831
20	1.17551	1.23926	1.48959	2.01313	0.51172	0.69052	2.06640	4.33800
21	1.12480	1.18996	1.42970	1.90916	0.49315	0.66546	1.99142	4.24666
22	1.07864	1.14510	1.37522	1.81400	0.47568	0.64188	1.92085	4.16260
23	1.03642	1.10411	1.32544	1.72680	0.45923	0.61968	1.85442	4.08452
24	0.99765	1.06649	1.27976	1.64680	0.44373	0.59877	1.79185	4.01140
25	0.96193	1.03184	1.23771	1.57333	0.42914	0.57908	1.73292	3.94249
26	0.92889	0.99982	1.19885	1.50578	0.41539	0.56053	1.67741	3.87718
27	0.89825	0.97014	1.16284	1.44363	0.40244	0.54305	1.62510	3.81507
28	0.86974	0.94255	1.12937	1.38638	0.39023	0.52658	1.57581	3.75586
29	0.84314	0.91683	1.09818	1.33361	0.37873	0.51106	1.52936	3.69938
30	0.81826	0.89279	1.06903	1.28493	0.36789	0.49643	1.48559	3.64550
31	0.79495	0.87027	1.04174	1.24000	0.35767	0.48264	1.44434	3.59420
32	0.77304	0.84913	1.01612	1.19849	0.34805	0.46966	1.40547	3.54546
33	0.75241	0.82925	0.99203	1.16013	0.33898	0.45742	1.36885	3.49934
34	0.73295	0.81050	0.96933	1.12466	0.33044	0.44589	1.33436	3.45584
35	0.71456	0.79280	0.94790	1.09185	0.32240	0.43504	1.30188	3.41507
36	0.69715	0.77606	0.92764	1.06151	0.31483	0.42483	1.27131	3.37706
37	0.68063	0.76020	0.90845	1.03343	0.30770	0.41522	1.24256	3.34186
38	0.66495	0.74515	0.89024	1.00745	0.30101	0.40618	1.21552	3.30950
39	0.65003	0.73085	0.87294	0.98342	0.29472	0.39769	1.19012	3.28001
40	0.63582	0.71724	0.85649	0.96121	0.28881	0.38973	1.16627	3.25337
41	0.62227	0.70427	0.84081	0.94068	0.28328	0.38225	1.14391	3.22956
42	0.60932	0.69189	0.82586	0.92173	0.27809	0.37525	1.12296	3.20849
43	0.59695	0.68007	0.81159	0.90425	0.27324	0.36871	1.10337	3.19001
44	0.58510	0.66877	0.79794	0.88815	0.26871	0.36259	1.08508	3.17404
45	0.57374	0.65795	0.78488	0.87335	0.26448	0.35689	1.06802	3.16034
46	0.56284	0.64757	0.77237	0.85978	0.26056	0.35160	1.05217	3.14865
47	0.55237	0.63762	0.76037	0.84737	0.25691	0.34668	1.03746	3.13862
48	0.54231	0.62804	0.74881	0.83602	0.25354	0.34213	1.02385	3.12986
49	0.54093	0.62662	0.74715	0.82543	0.25044	0.33794	1.01131	3.12986
50	0.53963	0.62528	0.74559	0.81593	0.24759	0.33410	0.99981	3.12986
51	0.53840	0.62401	0.74411	0.80747	0.24499	0.33059	0.98931	3.12986
52	0.53724	0.62282	0.74272	0.80000	0.24263	0.32741	0.97978	3.12986
53	0.53615	0.62170	0.74141	0.79350	0.24051	0.32454	0.97119	3.12986
54	0.53511	0.62063	0.74017	0.78792	0.23861	0.32198	0.96353	3.12986
55	0.53413	0.61962	0.73899	0.78325	0.23693	0.31972	0.95677	3.12986
56	0.54928	0.63358	0.75608	0.77946	0.23548	0.31776	0.95090	3.24152
57	0.56447	0.64759	0.77323	0.77653	0.23424	0.31608	0.94589	3.35317
58	0.57970	0.66164	0.79043	0.77446	0.23321	0.31469	0.94174	3.46482
59	0.59498	0.67574	0.80768	0.77322	0.23239	0.31359	0.93843	3.57648
60	0.61029	0.68988	0.82497	0.77283	0.23178	0.31276	0.93595	3.68813
61	0.62564	0.70405	0.84231	0.77327	0.23137	0.31221	0.93431	3.79978
62	0.64103	0.71826	0.85969	0.77455	0.23117	0.31194	0.93349	3.91144
63	0.65645	0.73250	0.87711	0.77669	0.23117	0.31194	0.93349	4.02309
64	0.67189	0.74677	0.89457	0.77969	0.23137	0.31221	0.93431	4.13474
65	0.68737	0.76107	0.91205	0.78357	0.23178	0.31276	0.93595	4.24640

Hardin 2016 Time Period 1 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	53.31442	53.88931	63.37230	61.48817	4.40367	4.85421	33.62724	154.94359
4	41.85611	42.59242	50.08749	56.17914	4.05848	4.47370	30.99130	123.57086
5	34.98108	35.81430	42.11662	51.44151	3.74716	4.13053	28.61404	100.92728
6	30.39774	31.29558	36.80270	47.20717	3.46602	3.82063	26.46722	84.21806
7	27.12396	28.06793	33.00706	43.41676	3.21182	3.54042	24.52608	71.63655
8	24.66859	25.64717	30.16032	40.01862	2.98168	3.28674	22.76872	61.98590
9	22.75887	23.76436	27.94621	36.96774	2.77308	3.05679	21.17577	54.45609
10	21.23112	22.25812	26.17493	34.22464	2.58377	2.84811	19.73013	48.48692
11	19.98111	21.02573	24.72565	31.75488	2.41176	2.65851	18.41670	43.68388
12	18.93944	19.99875	23.51796	29.52823	2.25531	2.48605	17.22200	39.76402
13	18.05803	19.12978	22.49605	27.51820	2.11285	2.32902	16.13414	36.52098
14	17.30255	18.38492	21.62012	25.70140	1.98300	2.18587	15.14255	33.80217
15	16.64778	17.73940	20.86101	24.05751	1.86451	2.05527	14.23776	31.49319
16	16.07487	17.17455	20.19676	22.56827	1.75630	1.93599	13.41145	29.50722
17	15.56937	16.67618	19.61069	21.21793	1.65738	1.82695	12.65609	27.77774
18	15.12003	16.23315	19.08971	19.99231	1.56688	1.72719	11.96504	26.25343
19	14.71798	15.83679	18.62358	18.87892	1.48403	1.63585	11.33231	24.89439
20	14.09772	15.23574	17.91676	17.86687	1.40811	1.55217	10.75262	23.66953
21	13.29524	14.42842	16.96739	16.94626	1.33851	1.47545	10.22114	22.55455
22	12.56572	13.69449	16.10432	16.10851	1.27467	1.40508	9.73364	21.53059
23	11.89962	13.02438	15.31630	15.34590	1.21609	1.34050	9.28629	20.58287
24	11.28905	12.41011	14.59394	14.65158	1.16231	1.28122	8.87562	19.70003
25	10.72732	11.84499	13.92937	14.01949	1.11293	1.22680	8.49857	18.87349
26	10.20879	11.32334	13.31592	13.44421	1.06759	1.17682	8.15237	18.09656
27	9.72868	10.84032	12.74791	12.92094	1.02597	1.13094	7.83451	17.36433
28	9.28286	10.39181	12.22047	12.44536	0.98777	1.08882	7.54276	16.67313
29	8.86778	9.97423	11.72941	12.01371	0.95271	1.05019	7.27511	16.02036
30	8.48038	9.58449	11.27108	11.62257	0.92058	1.01476	7.02973	15.40418
31	8.11797	9.21989	10.84233	11.26891	0.89115	0.98233	6.80500	14.82306
32	7.77821	8.87808	10.44037	10.95009	0.86424	0.95266	6.59946	14.27596
33	7.45904	8.55699	10.06277	10.66372	0.83966	0.92556	6.41179	13.76243
34	7.15865	8.25478	9.70739	10.40772	0.81727	0.90088	6.24079	13.28143
35	6.87542	7.96984	9.37230	10.18023	0.79692	0.87845	6.08543	12.83275
36	6.60793	7.70073	9.05584	9.97964	0.77850	0.85814	5.94475	12.41537
37	6.35489	7.44617	8.75649	9.80456	0.76188	0.83983	5.81789	12.02911
38	6.11518	7.20501	8.47289	9.65377	0.74698	0.82341	5.70411	11.67276
39	5.88776	6.97621	8.20383	9.52621	0.73371	0.80878	5.60275	11.34554
40	5.67170	6.75886	7.94822	9.42106	0.72199	0.79585	5.51321	11.04640
41	5.46619	6.55210	7.70509	9.33758	0.71174	0.78456	5.43499	10.77416
42	5.27047	6.35520	7.47353	9.27523	0.70292	0.77484	5.36763	10.52708
43	5.08384	6.16745	7.25274	9.23359	0.69547	0.76663	5.31077	10.30366
44	4.90570	5.98823	7.04199	9.21237	0.68936	0.75989	5.26409	10.10164
45	4.73548	5.81698	6.84061	9.21146	0.68455	0.75458	5.22732	9.91894
46	4.57266	5.65318	6.64797	9.23081	0.68100	0.75067	5.20025	9.75291
47	4.41676	5.49634	6.46354	9.27059	0.67871	0.74815	5.18276	9.60029
48	4.26737	5.34604	6.28679	9.33105	0.67766	0.74699	5.17473	9.45786
49	4.26737	5.34604	6.28679	9.41259	0.67784	0.74719	5.17613	9.45786
50	4.26737	5.34604	6.28679	9.51574	0.67926	0.74875	5.18696	9.45786
51	4.26737	5.34604	6.28679	9.64122	0.68192	0.75169	5.20728	9.45786
52	4.26737	5.34604	6.28679	9.78987	0.68584	0.75601	5.23720	9.45786
53	4.26737	5.34604	6.28679	9.96269	0.69104	0.76174	5.27689	9.45786
54	4.26737	5.34604	6.28679	10.16091	0.69754	0.76891	5.32657	9.45786
55	4.26737	5.34604	6.28679	10.38588	0.70539	0.77756	5.38651	9.45786
56	4.65810	5.77784	6.79458	10.63922	0.71463	0.78774	5.45705	11.73558
57	5.04883	6.20965	7.30237	10.92274	0.72531	0.79951	5.53858	14.01331
58	5.43956	6.64145	7.81016	11.23851	0.73748	0.81294	5.63157	16.29103
59	5.83029	7.07326	8.31795	11.58890	0.75123	0.82809	5.73655	18.56874
60	6.22102	7.50506	8.82574	11.97651	0.76663	0.84506	5.85413	20.84645
61	6.61176	7.93687	9.33353	12.40435	0.78377	0.86396	5.98501	23.12418
62	7.00249	8.36867	9.84132	12.87577	0.80275	0.88488	6.12996	25.40184
63	7.39322	8.80048	10.34911	13.39455	0.82369	0.90796	6.28985	27.67960
64	7.78395	9.23228	10.85690	13.96492	0.84672	0.93334	6.46568	29.95732
65	8.17468	9.66408	11.36469	14.59158	0.87197	0.96118	6.65852	32.23506

Hardin 2016 Time Period 1 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	1.69573	1.80240	2.26996	3.15385	1.84623	2.07556	11.15858	0.91266
4	1.54994	1.64744	2.07481	3.18648	1.76847	1.98815	10.68861	0.87295
5	1.46247	1.55447	1.95772	3.21912	1.69640	1.90712	10.25298	0.83999
6	1.40416	1.49249	1.87965	3.25175	1.62957	1.83199	9.84908	0.81327
7	1.36251	1.44822	1.82390	3.28439	1.56760	1.76232	9.47454	0.79230
8	1.33127	1.41501	1.78208	3.31703	1.51013	1.69771	9.12719	0.77658
9	1.30697	1.38919	1.74955	3.34966	1.45684	1.63780	8.80508	0.76565
10	1.28753	1.36853	1.72354	3.38230	1.40742	1.58224	8.50640	0.75908
11	1.27163	1.35162	1.70225	3.41494	1.36161	1.53074	8.22952	0.75643
12	1.25838	1.33753	1.68450	3.44757	1.31916	1.48302	7.97298	0.75729
13	1.24716	1.32561	1.66949	3.48021	1.27986	1.43883	7.73541	0.76127
14	1.23755	1.31540	1.65663	3.51285	1.24349	1.39794	7.51558	0.76800
15	1.22922	1.30655	1.64548	3.54548	1.20986	1.36015	7.31237	0.77713
16	1.22193	1.29880	1.63572	3.57812	1.17882	1.32525	7.12478	0.78832
17	1.21550	1.29196	1.62711	3.61075	1.15021	1.29309	6.95185	0.80125
18	1.20978	1.28589	1.61946	3.64339	1.12389	1.26350	6.79277	0.81563
19	1.20467	1.28045	1.61261	3.67603	1.09973	1.23634	6.64675	0.83116
20	1.20751	1.27198	1.60194	3.70866	1.07762	1.21148	6.51311	0.84759
21	1.21524	1.27344	1.60378	3.74130	1.05746	1.18881	6.39124	0.86467
22	1.22226	1.27477	1.60545	3.77393	1.03914	1.16822	6.28055	0.88217
23	1.22867	1.27598	1.60698	3.80657	1.02260	1.14962	6.18056	0.89989
24	1.23455	1.27709	1.60838	3.83920	1.00775	1.13293	6.09079	0.91764
25	1.23995	1.27811	1.60966	3.87184	0.99452	1.11806	6.01086	0.93524
26	1.24494	1.27905	1.61085	3.90448	0.98287	1.10495	5.94041	0.95253
27	1.24957	1.27993	1.61195	3.93712	0.97273	1.09355	5.87913	0.96939
28	1.25386	1.28074	1.61297	3.96975	0.96406	1.08381	5.82674	0.98569
29	1.25785	1.28149	1.61392	4.00239	0.95683	1.07568	5.78303	1.00134
30	1.26158	1.28220	1.61481	4.03502	0.95100	1.06913	5.74780	1.01624
31	1.26507	1.28286	1.61564	4.06766	0.94655	1.06413	5.72091	1.03035
32	1.26834	1.28347	1.61642	4.10030	0.94346	1.06065	5.70224	1.04361
33	1.27141	1.28405	1.61715	4.13294	0.94172	1.05869	5.69170	1.05600
34	1.27430	1.28460	1.61784	4.16557	0.94131	1.05824	5.68925	1.06750
35	1.27703	1.28512	1.61849	4.19821	0.94224	1.05928	5.69489	1.07814
36	1.27960	1.28560	1.61910	4.23084	0.94452	1.06184	5.70862	1.08793
37	1.28204	1.28606	1.61968	4.26348	0.94814	1.06591	5.73053	1.09691
38	1.28435	1.28650	1.62023	4.29611	0.95313	1.07152	5.76069	1.10517
39	1.28653	1.28691	1.62075	4.32875	0.95951	1.07870	5.79924	1.11277
40	1.28862	1.28730	1.62124	4.36139	0.96731	1.08746	5.84635	1.11981
41	1.29059	1.28768	1.62171	4.39402	0.97655	1.09785	5.90222	1.12642
42	1.29248	1.28803	1.62216	4.42666	0.98728	1.10991	5.96708	1.13273
43	1.29427	1.28837	1.62259	4.45930	0.99955	1.12371	6.04123	1.13891
44	1.29599	1.28870	1.62300	4.49193	1.01341	1.13929	6.12499	1.14511
45	1.29763	1.28901	1.62339	4.52457	1.02892	1.15672	6.21874	1.15153
46	1.29919	1.28930	1.62376	4.55721	1.04615	1.17610	6.32290	1.15838
47	1.30069	1.28959	1.62412	4.58984	1.06518	1.19750	6.43794	1.16589
48	1.30213	1.28986	1.62446	4.62248	1.08611	1.22101	6.56438	1.17430
49	1.33940	1.33768	1.68469	4.65511	1.10901	1.24677	6.70282	1.21254
50	1.37667	1.38550	1.74492	4.68775	1.13401	1.27487	6.85390	1.25077
51	1.41394	1.43333	1.80515	4.72039	1.16121	1.30546	7.01834	1.28901
52	1.45121	1.48115	1.86537	4.75303	1.19077	1.33868	7.19696	1.32725
53	1.48847	1.52897	1.92560	4.78566	1.22281	1.37470	7.39059	1.36549
54	1.52574	1.57679	1.98583	4.81829	1.25749	1.41369	7.60022	1.40372
55	1.56301	1.62462	2.04606	4.85093	1.29500	1.45585	7.82692	1.44196
56	1.60028	1.67244	2.10629	4.88357	1.33552	1.50141	8.07181	1.48020
57	1.63755	1.72026	2.16651	4.91620	1.37926	1.55058	8.33621	1.51844
58	1.67482	1.76808	2.22674	4.94884	1.42646	1.60365	8.62149	1.55668
59	1.71208	1.81591	2.28697	4.98148	1.47738	1.66089	8.92921	1.59492
60	1.74935	1.86373	2.34720	5.01411	1.53228	1.72261	9.26106	1.63315
61	1.78662	1.91155	2.40742	5.04675	1.59149	1.78917	9.61888	1.67139
62	1.82389	1.95937	2.46765	5.07938	1.65533	1.86094	10.00473	1.70963
63	1.86116	2.00720	2.52788	5.11202	1.72417	1.93834	10.42085	1.74787
64	1.89843	2.05502	2.58811	5.14466	1.79844	2.02183	10.86970	1.78610
65	1.93569	2.10284	2.64834	5.17730	1.87856	2.11191	11.35398	1.82434

Hardin 2016 Time Period 2 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	6.35628	6.86105	8.21109	10.19576	1.09745	1.48089	4.43164	16.06241
4	4.54052	4.90269	5.87216	8.11105	1.04192	1.40597	4.20742	13.82114
5	3.57130	3.85205	4.61539	6.90742	0.99008	1.33601	3.99806	12.16116
6	2.97524	3.20343	3.83861	6.08087	0.94164	1.27065	3.80247	10.90821
7	2.57403	2.76553	3.31369	5.45394	0.89636	1.20955	3.61962	9.94613
8	2.33070	2.49318	2.98506	5.01851	0.85401	1.15240	3.44860	9.19577
9	2.14460	2.28484	2.73370	4.64351	0.81438	1.09892	3.28856	8.60213
10	1.99410	2.11701	2.53149	4.31023	0.77726	1.04884	3.13870	8.12623
11	1.86949	1.97866	2.36502	4.01222	0.74250	1.00193	2.99831	7.73995
12	1.76430	1.86241	2.22536	3.74449	0.70991	0.95796	2.86672	7.42270
13	1.67405	1.76316	2.10632	3.50303	0.67935	0.91672	2.74332	7.15916
14	1.59553	1.67727	2.00348	3.28456	0.65068	0.87803	2.62754	6.93772
15	1.52640	1.60206	1.91361	3.08631	0.62377	0.84171	2.51887	6.74956
16	1.46490	1.53554	1.83426	2.90597	0.59850	0.80761	2.41681	6.58784
17	1.40968	1.47617	1.76359	2.74153	0.57475	0.77557	2.32093	6.44720
18	1.35969	1.42276	1.70015	2.59128	0.55244	0.74546	2.23082	6.32346
19	1.31412	1.37437	1.64280	2.45369	0.53146	0.71715	2.14609	6.21329
20	1.25955	1.31939	1.57689	2.33039	0.51172	0.69052	2.06640	6.11406
21	1.20606	1.26753	1.51400	2.22171	0.49315	0.66546	1.99142	6.02369
22	1.15731	1.22033	1.45678	2.12221	0.47568	0.64188	1.92085	5.94053
23	1.11269	1.17719	1.40448	2.03100	0.45923	0.61968	1.85442	5.86329
24	1.07169	1.13758	1.35650	1.94729	0.44373	0.59877	1.79185	5.79095
25	1.03387	1.10110	1.31230	1.87036	0.42914	0.57908	1.73292	5.72277
26	0.99887	1.06738	1.27146	1.79959	0.41539	0.56053	1.67741	5.65816
27	0.96637	1.03611	1.23360	1.73442	0.40244	0.54305	1.62510	5.59672
28	0.93610	1.00703	1.19840	1.67432	0.39023	0.52658	1.57581	5.53814
29	0.90783	0.97992	1.16559	1.61888	0.37873	0.51106	1.52936	5.48227
30	0.88136	0.95457	1.13492	1.56766	0.36789	0.49643	1.48559	5.42896
31	0.85653	0.93082	1.10620	1.52033	0.35767	0.48264	1.44434	5.37821
32	0.83316	0.90851	1.07924	1.47653	0.34805	0.46966	1.40547	5.32999
33	0.81114	0.88752	1.05387	1.43600	0.33898	0.45742	1.36885	5.28436
34	0.79035	0.86773	1.02996	1.39846	0.33044	0.44589	1.33436	5.24133
35	0.77067	0.84904	1.00738	1.36367	0.32240	0.43504	1.30188	5.20100
36	0.75201	0.83135	0.98603	1.33143	0.31483	0.42483	1.27131	5.16340
37	0.73430	0.81458	0.96580	1.30153	0.30770	0.41522	1.24256	5.12857
38	0.71745	0.79867	0.94660	1.27380	0.30101	0.40618	1.21552	5.09656
39	0.70141	0.78354	0.92835	1.24809	0.29472	0.39769	1.19012	5.06738
40	0.68610	0.76914	0.91099	1.22425	0.28881	0.38973	1.16627	5.04102
41	0.67148	0.75541	0.89444	1.20215	0.28328	0.38225	1.14391	5.01747
42	0.65750	0.74230	0.87866	1.18168	0.27809	0.37525	1.12296	4.99662
43	0.64411	0.72978	0.86358	1.16273	0.27324	0.36871	1.10337	4.97834
44	0.63128	0.71780	0.84916	1.14522	0.26871	0.36259	1.08508	4.96254
45	0.61896	0.70632	0.83536	1.12904	0.26448	0.35689	1.06802	4.94899
46	0.60712	0.69532	0.82213	1.11413	0.26056	0.35160	1.05217	4.93742
47	0.59574	0.68475	0.80944	1.10041	0.25691	0.34668	1.03746	4.92751
48	0.58478	0.67455	0.79716	1.08777	0.25354	0.34213	1.02385	4.91884
49	0.58257	0.67226	0.79449	1.07574	0.25044	0.33794	1.01131	4.91884
50	0.58049	0.67011	0.79197	1.06488	0.24759	0.33410	0.99981	4.91884
51	0.57853	0.66809	0.78959	1.05514	0.24499	0.33059	0.98931	4.91884
52	0.57668	0.66618	0.78735	1.04647	0.24263	0.32741	0.97978	4.91884
53	0.57494	0.66437	0.78524	1.03883	0.24051	0.32454	0.97119	4.91884
54	0.57328	0.66266	0.78324	1.03218	0.23861	0.32198	0.96353	4.91884
55	0.57172	0.66105	0.78135	1.02650	0.23693	0.31972	0.95677	4.91884
56	0.58631	0.67443	0.79776	1.02175	0.23548	0.31776	0.95090	5.02930
57	0.60098	0.68789	0.81426	1.01792	0.23424	0.31608	0.94589	5.13976
58	0.61572	0.70143	0.83085	1.01498	0.23321	0.31469	0.94174	5.25021
59	0.63052	0.71503	0.84752	1.01293	0.23239	0.31359	0.93843	5.36067
60	0.64539	0.72870	0.86426	1.01176	0.23178	0.31276	0.93595	5.47113
61	0.66032	0.74243	0.88108	1.01147	0.23137	0.31221	0.93431	5.58159
62	0.67529	0.75622	0.89796	1.01206	0.23117	0.31194	0.93349	5.69205
63	0.69033	0.77005	0.91490	1.01354	0.23117	0.31194	0.93349	5.80251
64	0.70540	0.78394	0.93190	1.01591	0.23137	0.31221	0.93431	5.91297
65	0.72053	0.79788	0.94896	1.01919	0.23178	0.31276	0.93595	6.02343

Hardin 2016 Time Period 2 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	53.31442	53.88931	63.37230	61.48817	4.40367	4.85421	33.62724	188.33632
4	41.85611	42.59242	50.08749	56.17914	4.05848	4.47370	30.99130	150.20233
5	34.98108	35.81430	42.11662	51.44151	3.74716	4.13053	28.61404	122.67867
6	30.39774	31.29558	36.80270	47.20717	3.46602	3.82063	26.46722	102.36838
7	27.12396	28.06793	33.00706	43.41676	3.21182	3.54042	24.52608	87.07538
8	24.66859	25.64717	30.16032	40.01862	2.98168	3.28674	22.76872	75.34486
9	22.75887	23.76436	27.94621	36.96774	2.77308	3.05679	21.17577	66.19228
10	21.23112	22.25812	26.17493	34.22464	2.58377	2.84811	19.73013	58.93660
11	19.98111	21.02573	24.72565	31.75488	2.41176	2.65851	18.41670	53.09845
12	18.93944	19.99875	23.51796	29.52823	2.25531	2.48605	17.22200	48.33377
13	18.05803	19.12978	22.49605	27.51820	2.11285	2.32902	16.13414	44.39178
14	17.30255	18.38492	21.62012	25.70140	1.98300	2.18587	15.14255	41.08708
15	16.64778	17.73940	20.86101	24.05751	1.86451	2.05527	14.23776	38.28046
16	16.07487	17.17455	20.19676	22.56827	1.75630	1.93599	13.41145	35.86647
17	15.56937	16.67618	19.61069	21.21793	1.65738	1.82695	12.65609	33.76427
18	15.12003	16.23315	19.08971	19.99231	1.56688	1.72719	11.96504	31.91148
19	14.71798	15.83679	18.62358	18.87892	1.48403	1.63585	11.33231	30.25952
20	14.09772	15.23574	17.91676	17.86687	1.40811	1.55217	10.75262	28.77069
21	13.29524	14.42842	16.96739	16.94626	1.33851	1.47545	10.22114	27.41542
22	12.56572	13.69449	16.10432	16.10851	1.27467	1.40508	9.73364	26.17078
23	11.89962	13.02438	15.31630	15.34590	1.21609	1.34050	9.28629	25.01878
24	11.28905	12.41011	14.59394	14.65158	1.16231	1.28122	8.87562	23.94566
25	10.72732	11.84499	13.92937	14.01949	1.11293	1.22680	8.49857	22.94099
26	10.20879	11.32334	13.31592	13.44421	1.06759	1.17682	8.15237	21.99663
27	9.72868	10.84032	12.74791	12.92094	1.02597	1.13094	7.83451	21.10661
28	9.28286	10.39181	12.22047	12.44536	0.98777	1.08882	7.54276	20.26642
29	8.86778	9.97423	11.72941	12.01371	0.95271	1.05019	7.27511	19.47296
30	8.48038	9.58449	11.27108	11.62257	0.92058	1.01476	7.02973	18.72398
31	8.11797	9.21989	10.84233	11.26891	0.89115	0.98233	6.80500	18.01761
32	7.77821	8.87808	10.44037	10.95009	0.86424	0.95266	6.59946	17.35263
33	7.45904	8.55699	10.06277	10.66372	0.83966	0.92556	6.41179	16.72842
34	7.15865	8.25478	9.70739	10.40772	0.81727	0.90088	6.24079	16.14377
35	6.87542	7.96984	9.37230	10.18023	0.79692	0.87845	6.08543	15.59841
36	6.60793	7.70073	9.05584	9.97964	0.77850	0.85814	5.94475	15.09107
37	6.35489	7.44617	8.75649	9.80456	0.76188	0.83983	5.81789	14.62157
38	6.11518	7.20501	8.47289	9.65377	0.74698	0.82341	5.70411	14.18842
39	5.88776	6.97621	8.20383	9.52621	0.73371	0.80878	5.60275	13.79067
40	5.67170	6.75886	7.94822	9.42106	0.72199	0.79585	5.51321	13.42708
41	5.46619	6.55210	7.70509	9.33758	0.71174	0.78456	5.43499	13.09615
42	5.27047	6.35520	7.47353	9.27523	0.70292	0.77484	5.36763	12.79583
43	5.08384	6.16745	7.25274	9.23359	0.69547	0.76663	5.31077	12.52426
44	4.90570	5.98823	7.04199	9.21237	0.68936	0.75989	5.26409	12.27870
45	4.73548	5.81698	6.84061	9.21146	0.68455	0.75458	5.22732	12.05663
46	4.57266	5.65318	6.64797	9.23081	0.68100	0.75067	5.20025	11.85481
47	4.41676	5.49634	6.46354	9.27059	0.67871	0.74815	5.18276	11.66930
48	4.26737	5.34604	6.28679	9.33105	0.67766	0.74699	5.17473	11.49617
49	4.26737	5.34604	6.28679	9.41259	0.67784	0.74719	5.17613	11.49617
50	4.26737	5.34604	6.28679	9.51574	0.67926	0.74875	5.18696	11.49617
51	4.26737	5.34604	6.28679	9.64122	0.68192	0.75169	5.20728	11.49617
52	4.26737	5.34604	6.28679	9.78987	0.68584	0.75601	5.23720	11.49617
53	4.26737	5.34604	6.28679	9.96269	0.69104	0.76174	5.27689	11.49617
54	4.26737	5.34604	6.28679	10.16091	0.69754	0.76891	5.32657	11.49617
55	4.26737	5.34604	6.28679	10.38588	0.70539	0.77756	5.38651	11.49617
56	4.65810	5.77784	6.79458	10.63922	0.71463	0.78774	5.45705	14.26478
57	5.04883	6.20965	7.30237	10.92274	0.72531	0.79951	5.53858	17.03339
58	5.43956	6.64145	7.81016	11.23851	0.73748	0.81294	5.63157	19.80197
59	5.83029	7.07326	8.31795	11.58890	0.75123	0.82809	5.73655	22.57060
60	6.22102	7.50506	8.82574	11.97651	0.76663	0.84506	5.85413	25.33920
61	6.61176	7.93687	9.33353	12.40435	0.78377	0.86396	5.98501	28.10777
62	7.00249	8.36867	9.84132	12.87577	0.80275	0.88488	6.12996	30.87637
63	7.39322	8.80048	10.34911	13.39455	0.82369	0.90796	6.28985	33.64500
64	7.78395	9.23228	10.85690	13.96492	0.84672	0.93334	6.46568	36.41359
65	8.17468	9.66408	11.36469	14.59158	0.87197	0.96118	6.65852	39.18221

Hardin 2016 Time Period 2 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	1.72229	1.83066	2.30595	3.20519	1.84623	2.07556	11.15858	0.82775
4	1.57423	1.67328	2.10771	3.23835	1.76847	1.98815	10.68861	0.79173
5	1.48539	1.57885	1.98876	3.27152	1.69640	1.90712	10.25298	0.76184
6	1.42616	1.51589	1.90946	3.30469	1.62957	1.83199	9.84908	0.73761
7	1.38386	1.47093	1.85282	3.33786	1.56760	1.76232	9.47454	0.71858
8	1.35213	1.43720	1.81034	3.37102	1.51013	1.69771	9.12719	0.70432
9	1.32745	1.41097	1.77730	3.40419	1.45684	1.63780	8.80508	0.69442
10	1.30771	1.38999	1.75086	3.43736	1.40742	1.58224	8.50640	0.68845
11	1.29155	1.37282	1.72924	3.47053	1.36161	1.53074	8.22952	0.68605
12	1.27809	1.35851	1.71121	3.50369	1.31916	1.48302	7.97298	0.68683
13	1.26670	1.34641	1.69596	3.53686	1.27986	1.43883	7.73541	0.69044
14	1.25694	1.33603	1.68289	3.57003	1.24349	1.39794	7.51558	0.69655
15	1.24848	1.32703	1.67157	3.60320	1.20986	1.36015	7.31237	0.70483
16	1.24108	1.31917	1.66165	3.63636	1.17882	1.32525	7.12478	0.71498
17	1.23454	1.31222	1.65291	3.66953	1.15021	1.29309	6.95185	0.72671
18	1.22874	1.30605	1.64513	3.70270	1.12389	1.26350	6.79277	0.73974
19	1.22354	1.30053	1.63818	3.73587	1.09973	1.23634	6.64675	0.75383
20	1.22643	1.29193	1.62735	3.76904	1.07762	1.21148	6.51311	0.76873
21	1.23428	1.29341	1.62921	3.80220	1.05746	1.18881	6.39124	0.78422
22	1.24141	1.29476	1.63091	3.83537	1.03914	1.16822	6.28055	0.80010
23	1.24792	1.29599	1.63246	3.86854	1.02260	1.14962	6.18056	0.81617
24	1.25389	1.29712	1.63388	3.90170	1.00775	1.13293	6.09079	0.83226
25	1.25938	1.29815	1.63519	3.93487	0.99452	1.11806	6.01086	0.84822
26	1.26445	1.29911	1.63639	3.96804	0.98287	1.10495	5.94041	0.86391
27	1.26915	1.30000	1.63751	4.00120	0.97273	1.09355	5.87913	0.87920
28	1.27350	1.30082	1.63855	4.03437	0.96406	1.08381	5.82674	0.89398
29	1.27756	1.30159	1.63951	4.06754	0.95683	1.07568	5.78303	0.90817
30	1.28135	1.30230	1.64041	4.10071	0.95100	1.06913	5.74780	0.92169
31	1.28489	1.30297	1.64126	4.13388	0.94655	1.06413	5.72091	0.93449
32	1.28821	1.30360	1.64205	4.16704	0.94346	1.06065	5.70224	0.94652
33	1.29133	1.30419	1.64279	4.20021	0.94172	1.05869	5.69170	0.95775
34	1.29427	1.30474	1.64349	4.23338	0.94131	1.05824	5.68925	0.96819
35	1.29704	1.30527	1.64415	4.26655	0.94224	1.05928	5.69489	0.97783
36	1.29965	1.30576	1.64477	4.29971	0.94452	1.06184	5.70862	0.98671
37	1.30213	1.30623	1.64536	4.33288	0.94814	1.06591	5.73053	0.99486
38	1.30447	1.30667	1.64592	4.36605	0.95313	1.07152	5.76069	1.00234
39	1.30669	1.30709	1.64645	4.39922	0.95951	1.07870	5.79924	1.00924
40	1.30881	1.30749	1.64695	4.43238	0.96731	1.08746	5.84635	1.01563
41	1.31081	1.30787	1.64743	4.46555	0.97655	1.09785	5.90222	1.02162
42	1.31273	1.30823	1.64788	4.49872	0.98728	1.10991	5.96708	1.02735
43	1.31455	1.30858	1.64832	4.53189	0.99955	1.12371	6.04123	1.03294
44	1.31629	1.30891	1.64873	4.56506	1.01341	1.13929	6.12499	1.03857
45	1.31796	1.30922	1.64913	4.59822	1.02892	1.15672	6.21874	1.04439
46	1.31955	1.30952	1.64951	4.63139	1.04615	1.17610	6.32290	1.05060
47	1.32107	1.30981	1.64987	4.66456	1.06518	1.19750	6.43794	1.05741
48	1.32253	1.31009	1.65022	4.69772	1.08611	1.22101	6.56438	1.06504
49	1.36039	1.35866	1.71140	4.73089	1.10901	1.24677	6.70282	1.09972
50	1.39824	1.40723	1.77258	4.76406	1.13401	1.27487	6.85390	1.13440
51	1.43609	1.45580	1.83377	4.79723	1.16121	1.30546	7.01834	1.16908
52	1.47394	1.50438	1.89495	4.83040	1.19077	1.33868	7.19696	1.20376
53	1.51180	1.55295	1.95613	4.86356	1.22281	1.37470	7.39059	1.23844
54	1.54965	1.60152	2.01732	4.89673	1.25749	1.41369	7.60022	1.27312
55	1.58750	1.65009	2.07850	4.92990	1.29500	1.45585	7.82692	1.30780
56	1.62535	1.69867	2.13968	4.96306	1.33552	1.50141	8.07181	1.34248
57	1.66320	1.74724	2.20087	4.99623	1.37926	1.55058	8.33621	1.37716
58	1.70106	1.79581	2.26205	5.02940	1.42646	1.60365	8.62149	1.41185
59	1.73891	1.84438	2.32323	5.06257	1.47738	1.66089	8.92921	1.44652
60	1.77676	1.89295	2.38442	5.09573	1.53228	1.72261	9.26106	1.48121
61	1.81461	1.94153	2.44560	5.12890	1.59149	1.78917	9.61888	1.51589
62	1.85247	1.99010	2.50678	5.16207	1.65533	1.86094	10.00473	1.55056
63	1.89032	2.03867	2.56797	5.19524	1.72417	1.93834	10.42085	1.58525
64	1.92817	2.08725	2.62915	5.22840	1.79844	2.02183	10.86970	1.61993
65	1.96602	2.13582	2.69033	5.26157	1.87856	2.11191	11.35398	1.65461

Hardin 2016 Time Period 3 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	6.57892	7.05390	8.43863	10.61134	1.09745	1.48089	4.43164	16.26424
4	4.67365	5.01210	6.00097	8.37461	1.04192	1.40597	4.20742	14.02460
5	3.66177	3.92291	4.69858	7.09805	0.99008	1.33601	3.99806	12.36582
6	3.04187	3.25340	3.89707	6.23026	0.94164	1.27065	3.80247	11.11378
7	2.62588	2.80291	3.35725	5.57736	0.89636	1.20955	3.61962	10.15240
8	2.37680	2.52592	3.02310	5.13081	0.85401	1.15240	3.44860	9.40259
9	2.18647	2.31440	2.76794	4.74745	0.81438	1.09892	3.28856	8.80938
10	2.03239	2.14407	2.56273	4.40708	0.77726	1.04884	3.13870	8.33382
11	1.90466	2.00371	2.39384	4.10295	0.74250	1.00193	2.99831	7.94783
12	1.79671	1.88582	2.25220	3.82985	0.70991	0.95796	2.86672	7.63081
13	1.70397	1.78521	2.13152	3.58361	0.67935	0.91672	2.74332	7.36745
14	1.62317	1.69819	2.02730	3.36083	0.65068	0.87803	2.62754	7.14618
15	1.55193	1.62202	1.93625	3.15866	0.62377	0.84171	2.51887	6.95816
16	1.48847	1.55469	1.85592	2.97473	0.59850	0.80761	2.41681	6.79655
17	1.43139	1.49463	1.78438	2.80697	0.57475	0.77557	2.32093	6.65602
18	1.37965	1.44062	1.72020	2.65362	0.55244	0.74546	2.23082	6.53236
19	1.33240	1.39172	1.66220	2.51315	0.53146	0.71715	2.14609	6.42227
20	1.27659	1.33621	1.59563	2.38753	0.51172	0.69052	2.06640	6.32311
21	1.22244	1.28371	1.53201	2.27724	0.49315	0.66546	1.99142	6.23281
22	1.17309	1.23593	1.47411	2.17627	0.47568	0.64188	1.92085	6.14971
23	1.12791	1.19224	1.42119	2.08371	0.45923	0.61968	1.85442	6.07253
24	1.08639	1.15214	1.37262	1.99875	0.44373	0.59877	1.79185	6.00024
25	1.04809	1.11520	1.32789	1.92067	0.42914	0.57908	1.73292	5.93211
26	1.01263	1.08104	1.28655	1.84882	0.41539	0.56053	1.67741	5.86755
27	0.97969	1.04937	1.24822	1.78265	0.40244	0.54305	1.62510	5.80615
28	0.94902	1.01991	1.21259	1.72163	0.39023	0.52658	1.57581	5.74762
29	0.92036	0.99244	1.17937	1.66530	0.37873	0.51106	1.52936	5.69178
30	0.89353	0.96676	1.14832	1.61327	0.36789	0.49643	1.48559	5.63852
31	0.86835	0.94268	1.11923	1.56517	0.35767	0.48264	1.44434	5.58781
32	0.84465	0.92008	1.09192	1.52066	0.34805	0.46966	1.40547	5.53962
33	0.82231	0.89880	1.06622	1.47944	0.33898	0.45742	1.36885	5.49402
34	0.80121	0.87874	1.04200	1.44126	0.33044	0.44589	1.33436	5.45102
35	0.78124	0.85978	1.01912	1.40586	0.32240	0.43504	1.30188	5.41072
36	0.76230	0.84184	0.99749	1.37304	0.31483	0.42483	1.27131	5.37315
37	0.74431	0.82484	0.97698	1.34259	0.30770	0.41522	1.24256	5.33834
38	0.72720	0.80869	0.95752	1.31434	0.30101	0.40618	1.21552	5.30636
39	0.71090	0.79334	0.93903	1.28813	0.29472	0.39769	1.19012	5.27720
40	0.69535	0.77872	0.92142	1.26382	0.28881	0.38973	1.16627	5.25086
41	0.68049	0.76479	0.90465	1.24127	0.28328	0.38225	1.14391	5.22732
42	0.66628	0.75148	0.88864	1.22037	0.27809	0.37525	1.12296	5.20649
43	0.65266	0.73877	0.87335	1.20101	0.27324	0.36871	1.10337	5.18823
44	0.63961	0.72660	0.85872	1.18310	0.26871	0.36259	1.08508	5.17244
45	0.62707	0.71494	0.84471	1.16654	0.26448	0.35689	1.06802	5.15889
46	0.61502	0.70376	0.83129	1.15127	0.26056	0.35160	1.05217	5.14734
47	0.60343	0.69303	0.81841	1.13720	0.25691	0.34668	1.03746	5.13743
48	0.59227	0.68266	0.80594	1.12422	0.25354	0.34213	1.02385	5.12877
49	0.58987	0.68017	0.80303	1.11180	0.25044	0.33794	1.01131	5.12877
50	0.58760	0.67783	0.80028	1.10058	0.24759	0.33410	0.99981	5.12877
51	0.58547	0.67562	0.79769	1.09050	0.24499	0.33059	0.98931	5.12877
52	0.58346	0.67354	0.79525	1.08152	0.24263	0.32741	0.97978	5.12877
53	0.58156	0.67157	0.79295	1.07359	0.24051	0.32454	0.97119	5.12877
54	0.57976	0.66971	0.79077	1.06667	0.23861	0.32198	0.96353	5.12877
55	0.57806	0.66795	0.78870	1.06073	0.23693	0.31972	0.95677	5.12877
56	0.59252	0.68120	0.80495	1.05574	0.23548	0.31776	0.95090	5.23914
57	0.60706	0.69453	0.82130	1.05168	0.23424	0.31608	0.94589	5.34952
58	0.62168	0.70794	0.83774	1.04854	0.23321	0.31469	0.94174	5.45990
59	0.63638	0.72143	0.85428	1.04630	0.23239	0.31359	0.93843	5.57028
60	0.65114	0.73499	0.87089	1.04495	0.23178	0.31276	0.93595	5.68066
61	0.66596	0.74861	0.88758	1.04449	0.23137	0.31221	0.93431	5.79104
62	0.68085	0.76230	0.90434	1.04493	0.23117	0.31194	0.93349	5.90142
63	0.69578	0.77604	0.92117	1.04626	0.23117	0.31194	0.93349	6.01180
64	0.71078	0.78984	0.93807	1.04850	0.23137	0.31221	0.93431	6.12217
65	0.72582	0.80368	0.95502	1.05167	0.23178	0.31276	0.93595	6.23255

Hardin 2016 Time Period 3 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	53.31442	53.88931	63.37230	61.72792	4.40367	4.85421	33.62724	193.01875
4	41.85611	42.59242	50.08749	56.39818	4.05848	4.47370	30.99130	153.93668
5	34.98108	35.81430	42.11662	51.64206	3.74716	4.13053	28.61404	125.72874
6	30.39774	31.29558	36.80270	47.39124	3.46602	3.82063	26.46722	104.91351
7	27.12396	28.06793	33.00706	43.58600	3.21182	3.54042	24.52608	89.24022
8	24.66859	25.64717	30.16032	40.17465	2.98168	3.28674	22.76872	77.21806
9	22.75887	23.76436	27.94621	37.11185	2.77308	3.05679	21.17577	67.83792
10	21.23112	22.25812	26.17493	34.35803	2.58377	2.84811	19.73013	60.40192
11	19.98111	21.02573	24.72565	31.87866	2.41176	2.65851	18.41670	54.41859
12	18.93944	19.99875	23.51796	29.64333	2.25531	2.48605	17.22200	49.53546
13	18.05803	19.12978	22.49605	27.62546	2.11285	2.32902	16.13414	45.49548
14	17.30255	18.38492	21.62012	25.80162	1.98300	2.18587	15.14255	42.10860
15	16.64778	17.73940	20.86101	24.15131	1.86451	2.05527	14.23776	39.23218
16	16.07487	17.17455	20.19676	22.65627	1.75630	1.93599	13.41145	36.75818
17	15.56937	16.67618	19.61069	21.30066	1.65738	1.82695	12.65609	34.60370
18	15.12003	16.23315	19.08971	20.07024	1.56688	1.72719	11.96504	32.70485
19	14.71798	15.83679	18.62358	18.95251	1.48403	1.63585	11.33231	31.01183
20	14.09772	15.23574	17.91676	17.93651	1.40811	1.55217	10.75262	29.48599
21	13.29524	14.42842	16.96739	17.01233	1.33851	1.47545	10.22114	28.09703
22	12.56572	13.69449	16.10432	16.17131	1.27467	1.40508	9.73364	26.82143
23	11.89962	13.02438	15.31630	15.40573	1.21609	1.34050	9.28629	25.64081
24	11.28905	12.41011	14.59394	14.70870	1.16231	1.28122	8.87562	24.54100
25	10.72732	11.84499	13.92937	14.07415	1.11293	1.22680	8.49857	23.51134
26	10.20879	11.32334	13.31592	13.49663	1.06759	1.17682	8.15237	22.54350
27	9.72868	10.84032	12.74791	12.97131	1.02597	1.13094	7.83451	21.63135
28	9.28286	10.39181	12.22047	12.49388	0.98777	1.08882	7.54276	20.77028
29	8.86778	9.97423	11.72941	12.06054	0.95271	1.05019	7.27511	19.95711
30	8.48038	9.58449	11.27108	11.66787	0.92058	1.01476	7.02973	19.18951
31	8.11797	9.21989	10.84233	11.31284	0.89115	0.98233	6.80500	18.46559
32	7.77821	8.87808	10.44037	10.99278	0.86424	0.95266	6.59946	17.78406
33	7.45904	8.55699	10.06277	10.70530	0.83966	0.92556	6.41179	17.14433
34	7.15865	8.25478	9.70739	10.44830	0.81727	0.90088	6.24079	16.54514
35	6.87542	7.96984	9.37230	10.21992	0.79692	0.87845	6.08543	15.98622
36	6.60793	7.70073	9.05584	10.01855	0.77850	0.85814	5.94475	15.46627
37	6.35489	7.44617	8.75649	9.84278	0.76188	0.83983	5.81789	14.98509
38	6.11518	7.20501	8.47289	9.69140	0.74698	0.82341	5.70411	14.54117
39	5.88776	6.97621	8.20383	9.56335	0.73371	0.80878	5.60275	14.13354
40	5.67170	6.75886	7.94822	9.45779	0.72199	0.79585	5.51321	13.76090
41	5.46619	6.55210	7.70509	9.37399	0.71174	0.78456	5.43499	13.42175
42	5.27047	6.35520	7.47353	9.31138	0.70292	0.77484	5.36763	13.13396
43	5.08384	6.16745	7.25274	9.26958	0.69547	0.76663	5.31077	12.83564
44	4.90570	5.98823	7.04199	9.24829	0.68936	0.75989	5.26409	12.58398
45	4.73548	5.81698	6.84061	9.24737	0.68455	0.75458	5.22732	12.35638
46	4.57266	5.65318	6.64797	9.26680	0.68100	0.75067	5.20025	12.14955
47	4.41676	5.49634	6.46354	9.30673	0.67871	0.74815	5.18276	11.95942
48	4.26737	5.34604	6.28679	9.36743	0.67766	0.74699	5.17473	11.78199
49	4.26737	5.34604	6.28679	9.44928	0.67784	0.74719	5.17613	11.78199
50	4.26737	5.34604	6.28679	9.55284	0.67926	0.74875	5.18696	11.78199
51	4.26737	5.34604	6.28679	9.67880	0.68192	0.75169	5.20728	11.78199
52	4.26737	5.34604	6.28679	9.82804	0.68584	0.75601	5.23720	11.78199
53	4.26737	5.34604	6.28679	10.00153	0.69104	0.76174	5.27689	11.78199
54	4.26737	5.34604	6.28679	10.20052	0.69754	0.76891	5.32657	11.78199
55	4.26737	5.34604	6.28679	10.42637	0.70539	0.77756	5.38651	11.78199
56	4.65810	5.77784	6.79458	10.68070	0.71463	0.78774	5.45705	14.61943
57	5.04883	6.20965	7.30237	10.96532	0.72531	0.79951	5.53858	17.45688
58	5.43956	6.64145	7.81016	11.28233	0.73748	0.81294	5.63157	20.29428
59	5.83029	7.07326	8.31795	11.63407	0.75123	0.82809	5.73655	23.13173
60	6.22102	7.50506	8.82574	12.02320	0.76663	0.84506	5.85413	25.96916
61	6.61176	7.93687	9.33353	12.45271	0.78377	0.86396	5.98501	28.80663
62	7.00249	8.36867	9.84132	12.92597	0.80275	0.88488	6.12996	31.64401
63	7.39322	8.80048	10.34911	13.44676	0.82369	0.90796	6.28985	34.48151
64	7.78395	9.23228	10.85690	14.01936	0.84672	0.93334	6.46568	37.31894
65	8.17468	9.66408	11.36469	14.64846	0.87197	0.96118	6.65852	40.15637

Hardin 2016 Time Period 3 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	1.72512	1.83367	2.30978	3.21139	1.84623	2.07556	11.15858	0.81913
4	1.57681	1.67602	2.11120	3.24462	1.76847	1.98815	10.68861	0.78349
5	1.48782	1.58144	1.99206	3.27785	1.69640	1.90712	10.25298	0.75391
6	1.42850	1.51838	1.91263	3.31108	1.62957	1.83199	9.84908	0.72993
7	1.38612	1.47334	1.85590	3.34431	1.56760	1.76232	9.47454	0.71110
8	1.35434	1.43956	1.81334	3.37755	1.51013	1.69771	9.12719	0.69700
9	1.32962	1.41329	1.78025	3.41078	1.45684	1.63780	8.80508	0.68719
10	1.30985	1.39227	1.75377	3.44401	1.40742	1.58224	8.50640	0.68129
11	1.29367	1.37507	1.73211	3.47724	1.36161	1.53074	8.22952	0.67891
12	1.28019	1.36074	1.71405	3.51047	1.31916	1.48302	7.97298	0.67968
13	1.26878	1.34861	1.69878	3.54370	1.27986	1.43883	7.73541	0.68326
14	1.25900	1.33822	1.68569	3.57694	1.24349	1.39794	7.51558	0.68930
15	1.25053	1.32921	1.67434	3.61017	1.20986	1.36015	7.31237	0.69750
16	1.24311	1.32133	1.66441	3.64340	1.17882	1.32525	7.12478	0.70754
17	1.23657	1.31438	1.65565	3.67663	1.15021	1.29309	6.95185	0.71914
18	1.23075	1.30819	1.64787	3.70986	1.12389	1.26350	6.79277	0.73204
19	1.22555	1.30266	1.64090	3.74310	1.09973	1.23634	6.64675	0.74598
20	1.22844	1.29405	1.63005	3.77633	1.07762	1.21148	6.51311	0.76073
21	1.23630	1.29553	1.63192	3.80956	1.05746	1.18881	6.39124	0.77606
22	1.24345	1.29688	1.63362	3.84279	1.03914	1.16822	6.28055	0.79177
23	1.24997	1.29812	1.63517	3.87602	1.02260	1.14962	6.18056	0.80768
24	1.25595	1.29924	1.63659	3.90925	1.00775	1.13293	6.09079	0.82360
25	1.26145	1.30028	1.63790	3.94248	0.99452	1.11806	6.01086	0.83940
26	1.26652	1.30124	1.63911	3.97571	0.98287	1.10495	5.94041	0.85492
27	1.27123	1.30213	1.64023	4.00895	0.97273	1.09355	5.87913	0.87005
28	1.27559	1.30296	1.64127	4.04218	0.96406	1.08381	5.82674	0.88468
29	1.27966	1.30372	1.64224	4.07541	0.95683	1.07568	5.78303	0.89872
30	1.28345	1.30444	1.64314	4.10864	0.95100	1.06913	5.74780	0.91210
31	1.28700	1.30511	1.64398	4.14187	0.94655	1.06413	5.72091	0.92477
32	1.29033	1.30574	1.64477	4.17510	0.94346	1.06065	5.70224	0.93667
33	1.29345	1.30633	1.64552	4.20834	0.94172	1.05869	5.69170	0.94779
34	1.29639	1.30689	1.64622	4.24157	0.94131	1.05824	5.68925	0.95811
35	1.29916	1.30741	1.64688	4.27480	0.94224	1.05928	5.69489	0.96766
36	1.30178	1.30791	1.64750	4.30803	0.94452	1.06184	5.70862	0.97644
37	1.30426	1.30837	1.64809	4.34126	0.94814	1.06591	5.73053	0.98451
38	1.30661	1.30882	1.64865	4.37450	0.95313	1.07152	5.76069	0.99191
39	1.30883	1.30924	1.64918	4.40773	0.95951	1.07870	5.79924	0.99874
40	1.31095	1.30964	1.64968	4.44096	0.96731	1.08746	5.84635	1.00506
41	1.31296	1.31002	1.65016	4.47419	0.97655	1.09785	5.90222	1.01099
42	1.31488	1.31038	1.65062	4.50742	0.98728	1.10991	5.96708	1.01666
43	1.31671	1.31073	1.65105	4.54065	0.99955	1.12371	6.04123	1.02219
44	1.31845	1.31106	1.65147	4.57389	1.01341	1.13929	6.12499	1.02776
45	1.32012	1.31137	1.65187	4.60712	1.02892	1.15672	6.21874	1.03352
46	1.32171	1.31167	1.65225	4.64035	1.04615	1.17610	6.32290	1.03967
47	1.32324	1.31196	1.65261	4.67358	1.06518	1.19750	6.43794	1.04641
48	1.32470	1.31224	1.65296	4.70682	1.08611	1.22101	6.56438	1.05396
49	1.32621	1.36089	1.71424	4.74004	1.10901	1.24677	6.70282	1.08828
50	1.40053	1.40954	1.77553	4.77328	1.13401	1.27487	6.85390	1.12260
51	1.43844	1.45819	1.83681	4.80651	1.16121	1.30546	7.01834	1.15692
52	1.47636	1.50685	1.89810	4.83974	1.19077	1.33868	7.19696	1.19124
53	1.51427	1.55550	1.95938	4.87297	1.22281	1.37470	7.39059	1.22556
54	1.55219	1.60415	2.02066	4.90620	1.25749	1.41369	7.60022	1.25988
55	1.59010	1.65280	2.08195	4.93943	1.29500	1.45585	7.82692	1.29420
56	1.62802	1.70145	2.14323	4.97266	1.33552	1.50141	8.07181	1.32852
57	1.66593	1.75011	2.20452	5.00590	1.37926	1.55058	8.33621	1.36283
58	1.70385	1.79876	2.26580	5.03913	1.42646	1.60365	8.62149	1.39715
59	1.74176	1.84741	2.32709	5.07236	1.47738	1.66089	8.92921	1.43147
60	1.77967	1.89606	2.38837	5.10559	1.53228	1.72261	9.26106	1.46579
61	1.81759	1.94471	2.44966	5.13883	1.59149	1.78917	9.61888	1.50011
62	1.85550	1.99337	2.51094	5.17206	1.65533	1.86094	10.00473	1.53443
63	1.89342	2.04202	2.57223	5.20529	1.72417	1.93834	10.42085	1.56875
64	1.93133	2.09067	2.63351	5.23852	1.79844	2.02183	10.86970	1.60307
65	1.96925	2.13932	2.69480	5.27175	1.87856	2.11191	11.35398	1.63739

Hardin 2016 Time Period 4 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	5.42637	6.05906	7.26639	8.49864	1.09745	1.48089	4.43164	14.44035
4	3.98051	4.44398	5.33395	7.03156	1.04192	1.40597	4.20742	12.17585
5	3.18757	3.55168	4.26479	6.11967	0.99008	1.33601	3.99806	10.49866
6	2.69001	2.98879	3.58965	5.45485	0.94164	1.27065	3.80247	9.23272
7	2.34982	2.60238	3.12584	4.92744	0.89636	1.20955	3.61962	8.26067
8	2.13012	2.34918	2.82001	4.53069	0.85401	1.15240	3.44860	7.50254
9	1.96135	2.15394	2.58430	4.18371	0.81438	1.09892	3.28856	6.90275
10	1.82549	1.99643	2.39445	3.87376	0.77726	1.04884	3.13870	6.42192
11	1.71358	1.86635	2.23794	3.59565	0.74250	1.00193	2.99831	6.03163
12	1.61962	1.75685	2.10643	3.34523	0.70991	0.95796	2.86672	5.71110
13	1.53948	1.66318	1.99417	3.11909	0.67935	0.91672	2.74332	5.44482
14	1.47019	1.58194	1.89701	2.91436	0.65068	0.87803	2.62754	5.22109
15	1.40958	1.51066	1.81195	2.72861	0.62377	0.84171	2.51887	5.03098
16	1.35603	1.44746	1.73671	2.55974	0.59850	0.80761	2.41681	4.86758
17	1.30828	1.39092	1.66956	2.40592	0.57475	0.77557	2.32093	4.72549
18	1.26538	1.33993	1.60915	2.26558	0.55244	0.74546	2.23082	4.60046
19	1.22655	1.29361	1.55442	2.13730	0.53146	0.71715	2.14609	4.48915
20	1.17707	1.24081	1.49118	2.02134	0.51172	0.69052	2.06640	4.38889
21	1.12633	1.19149	1.43126	1.91732	0.49315	0.66546	1.99142	4.29759
22	1.08013	1.14660	1.37674	1.82210	0.47568	0.64188	1.92085	4.21356
23	1.03788	1.10557	1.32693	1.73486	0.45923	0.61968	1.85442	4.13552
24	0.99909	1.06793	1.28123	1.65482	0.44373	0.59877	1.79185	4.06243
25	0.96334	1.03326	1.23915	1.58131	0.42914	0.57908	1.73292	3.99355
26	0.93028	1.00122	1.20027	1.51373	0.41539	0.56053	1.67741	3.92827
27	0.89961	0.97152	1.16423	1.45153	0.40244	0.54305	1.62510	3.86619
28	0.87108	0.94391	1.13074	1.39425	0.39023	0.52658	1.57581	3.80701
29	0.84446	0.91817	1.09953	1.34146	0.37873	0.51106	1.52936	3.75055
30	0.81957	0.89411	1.07036	1.29275	0.36789	0.49643	1.48559	3.69670
31	0.79623	0.87158	1.04305	1.24778	0.35767	0.48264	1.44434	3.64542
32	0.77430	0.85042	1.01742	1.20624	0.34805	0.46966	1.40547	3.59669
33	0.75365	0.83052	0.99331	1.16786	0.33898	0.45742	1.36885	3.55059
34	0.73418	0.81176	0.97059	1.13236	0.33044	0.44589	1.33436	3.50712
35	0.71577	0.79405	0.94915	1.09953	0.32240	0.43504	1.30188	3.46637
36	0.69834	0.77729	0.92887	1.06916	0.31483	0.42483	1.27131	3.42838
37	0.68181	0.76142	0.90966	1.04106	0.30770	0.41522	1.24256	3.39319
38	0.66611	0.74636	0.89144	1.01506	0.30101	0.40618	1.21552	3.36085
39	0.65118	0.73204	0.87413	0.99101	0.29472	0.39769	1.19012	3.33137
40	0.63696	0.71842	0.85766	0.96878	0.28881	0.38973	1.16627	3.30473
41	0.62339	0.70544	0.84197	0.94823	0.28328	0.38225	1.14391	3.28094
42	0.61043	0.69305	0.82701	0.92926	0.27809	0.37525	1.12296	3.25988
43	0.59803	0.68122	0.81272	0.91176	0.27324	0.36871	1.10337	3.24140
44	0.58617	0.66990	0.79907	0.89564	0.26871	0.36259	1.08508	3.22544
45	0.57480	0.65907	0.78599	0.88082	0.26448	0.35689	1.06802	3.21174
46	0.56389	0.64869	0.77347	0.86724	0.26056	0.35160	1.05217	3.20006
47	0.55341	0.63873	0.76146	0.85481	0.25691	0.34668	1.03746	3.19004
48	0.54334	0.62913	0.74989	0.84344	0.25354	0.34213	1.02385	3.18128
49	0.54194	0.62770	0.74822	0.83283	0.25044	0.33794	1.01131	3.18128
50	0.54063	0.62635	0.74664	0.82332	0.24759	0.33410	0.99981	3.18128
51	0.53940	0.62508	0.74516	0.81484	0.24499	0.33059	0.98931	3.18128
52	0.53823	0.62388	0.74376	0.80736	0.24263	0.32741	0.97978	3.18128
53	0.53713	0.62275	0.74244	0.80085	0.24051	0.32454	0.97119	3.18128
54	0.53609	0.62167	0.74119	0.79526	0.23861	0.32198	0.96353	3.18128
55	0.53510	0.62066	0.74000	0.79058	0.23693	0.31972	0.95677	3.18128
56	0.55024	0.63461	0.75708	0.78677	0.23548	0.31776	0.95090	3.29289
57	0.56542	0.64861	0.77422	0.78384	0.23424	0.31608	0.94589	3.40449
58	0.58065	0.66266	0.79141	0.78175	0.23321	0.31469	0.94174	3.51610
59	0.59592	0.67675	0.80866	0.78051	0.23239	0.31359	0.93843	3.62770
60	0.61123	0.69088	0.82595	0.78010	0.23178	0.31276	0.93595	3.73930
61	0.62658	0.70505	0.84328	0.78053	0.23137	0.31221	0.93431	3.85091
62	0.64196	0.71925	0.86065	0.78181	0.23117	0.31194	0.93349	3.96251
63	0.65737	0.73349	0.87807	0.78394	0.23117	0.31194	0.93349	4.07412
64	0.67281	0.74776	0.89552	0.78693	0.23137	0.31221	0.93431	4.18572
65	0.68828	0.76206	0.91300	0.79081	0.23178	0.31276	0.93595	4.29732

Hardin 2016 Time Period 4 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	53.31442	53.88931	63.37230	61.48817	4.40367	4.85421	33.62724	155.73599
4	41.85611	42.59242	50.08749	56.17914	4.05848	4.47370	30.99130	124.20282
5	34.98108	35.81430	42.11662	51.44151	3.74716	4.13053	28.61404	101.44342
6	30.39774	31.29558	36.80270	47.20717	3.46602	3.82063	26.46722	84.64879
7	27.12396	28.06793	33.00706	43.41676	3.21182	3.54042	24.52608	72.00293
8	24.66859	25.64717	30.16032	40.01862	2.98168	3.28674	22.76872	62.30292
9	22.75887	23.76436	27.94621	36.96774	2.77308	3.05679	21.17577	54.73460
10	21.23112	22.25812	26.17493	34.22464	2.58377	2.84811	19.73013	48.73491
11	19.98111	21.02573	24.72565	31.75488	2.41176	2.65851	18.41670	43.90732
12	18.93944	19.99875	23.51796	29.52823	2.25531	2.48605	17.22200	39.96735
13	18.05803	19.12978	22.49605	27.51820	2.11285	2.32902	16.13414	36.70775
14	17.30255	18.38492	21.62012	25.70140	1.98300	2.18587	15.14255	33.97507
15	16.64778	17.73940	20.86101	24.05751	1.86451	2.05527	14.23776	31.65424
16	16.07487	17.17455	20.19676	22.56827	1.75630	1.93599	13.41145	29.65813
17	15.56937	16.67618	19.61069	21.21793	1.65738	1.82695	12.65609	27.91977
18	15.12003	16.23315	19.08971	19.99231	1.56688	1.72719	11.96504	26.38774
19	14.71798	15.83679	18.62358	18.87892	1.48403	1.63585	11.33231	25.02170
20	14.09772	15.23574	17.91676	17.86687	1.40811	1.55217	10.75262	23.79060
21	13.29524	14.42842	16.96739	16.94626	1.33851	1.47545	10.22114	22.66992
22	12.56572	13.69449	16.10432	16.10851	1.27467	1.40508	9.73364	21.64070
23	11.89962	13.02438	15.31630	15.34590	1.21609	1.34050	9.28629	20.68814
24	11.28905	12.41011	14.59394	14.65158	1.16231	1.28122	8.87562	19.80077
25	10.72732	11.84499	13.92937	14.01949	1.11293	1.22680	8.49857	18.97000
26	10.20879	11.32334	13.31592	13.44421	1.06759	1.17682	8.15237	18.18909
27	9.72868	10.84032	12.74791	12.92094	1.02597	1.13094	7.83451	17.45314
28	9.28286	10.39181	12.22047	12.44536	0.98777	1.08882	7.54276	16.75839
29	8.86778	9.97423	11.72941	12.01371	0.95271	1.05019	7.27511	16.10229
30	8.48038	9.58449	11.27108	11.62257	0.92058	1.01476	7.02973	15.48296
31	8.11797	9.21989	10.84233	11.26891	0.89115	0.98233	6.80500	14.89887
32	7.77821	8.87808	10.44037	10.95009	0.86424	0.95266	6.59946	14.34897
33	7.45904	8.55699	10.06277	10.66372	0.83966	0.92556	6.41179	13.83281
34	7.15865	8.25478	9.70739	10.40772	0.81727	0.90088	6.24079	13.34935
35	6.87542	7.96984	9.37230	10.18023	0.79692	0.87845	6.08543	12.89838
36	6.60793	7.70073	9.05584	9.97964	0.77850	0.85814	5.94475	12.47886
37	6.35489	7.44617	8.75649	9.80456	0.76188	0.83983	5.81789	12.09063
38	6.11518	7.20501	8.47289	9.65377	0.74698	0.82341	5.70411	11.73246
39	5.88776	6.97621	8.20383	9.52621	0.73371	0.80878	5.60275	11.40356
40	5.67170	6.75886	7.94822	9.42106	0.72199	0.79585	5.51321	11.10290
41	5.46619	6.55210	7.70509	9.33758	0.71174	0.78456	5.43499	10.82926
42	5.27047	6.35520	7.47353	9.27523	0.70292	0.77484	5.36763	10.58092
43	5.08384	6.16745	7.25274	9.23359	0.69547	0.76663	5.31077	10.35635
44	4.90570	5.98823	7.04199	9.21237	0.68936	0.75989	5.26409	10.15331
45	4.73548	5.81698	6.84061	9.21146	0.68455	0.75458	5.22732	9.96967
46	4.57266	5.65318	6.64797	9.23081	0.68100	0.75067	5.20025	9.80278
47	4.41676	5.49634	6.46354	9.27059	0.67871	0.74815	5.18276	9.64938
48	4.26737	5.34604	6.28679	9.33105	0.67766	0.74699	5.17473	9.50623
49	4.26737	5.34604	6.28679	9.41259	0.67784	0.74719	5.17613	9.50623
50	4.26737	5.34604	6.28679	9.51574	0.67926	0.74875	5.18696	9.50623
51	4.26737	5.34604	6.28679	9.64122	0.68192	0.75169	5.20728	9.50623
52	4.26737	5.34604	6.28679	9.78987	0.68584	0.75601	5.23720	9.50623
53	4.26737	5.34604	6.28679	9.96269	0.69104	0.76174	5.27689	9.50623
54	4.26737	5.34604	6.28679	10.16091	0.69754	0.76891	5.32657	9.50623
55	4.26737	5.34604	6.28679	10.38588	0.70539	0.77756	5.38651	9.50623
56	4.65810	5.77784	6.79458	10.63922	0.71463	0.78774	5.45705	11.79560
57	5.04883	6.20965	7.30237	10.92274	0.72531	0.79951	5.53858	14.08498
58	5.43956	6.64145	7.81016	11.23851	0.73748	0.81294	5.63157	16.37434
59	5.83029	7.07326	8.31795	11.58890	0.75123	0.82809	5.73655	18.66370
60	6.22102	7.50506	8.82574	11.97651	0.76663	0.84506	5.85413	20.95306
61	6.61176	7.93687	9.33353	12.40435	0.78377	0.86396	5.98501	23.24243
62	7.00249	8.36867	9.84132	12.87577	0.80275	0.88488	6.12996	25.53178
63	7.39322	8.80048	10.34911	13.39455	0.82369	0.90796	6.28985	27.82115
64	7.78395	9.23228	10.85690	13.96492	0.84672	0.93334	6.46568	30.11053
65	8.17468	9.66408	11.36469	14.59158	0.87197	0.96118	6.65852	32.39993

Hardin 2016 Time Period 4 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	1.69687	1.80361	2.27151	3.15385	1.84623	2.07556	11.15858	0.90987
4	1.55099	1.64856	2.07622	3.18648	1.76847	1.98815	10.68861	0.87028
5	1.46346	1.55552	1.95905	3.21912	1.69640	1.90712	10.25298	0.83742
6	1.40511	1.49350	1.88094	3.25175	1.62957	1.83199	9.84908	0.81079
7	1.36343	1.44920	1.82514	3.28439	1.56760	1.76232	9.47454	0.78987
8	1.33217	1.41597	1.78330	3.31703	1.51013	1.69771	9.12719	0.77420
9	1.30785	1.39013	1.75075	3.34966	1.45684	1.63780	8.80508	0.76331
10	1.28840	1.36945	1.72471	3.38230	1.40742	1.58224	8.50640	0.75676
11	1.27249	1.35254	1.70341	3.41494	1.36161	1.53074	8.22952	0.75411
12	1.25922	1.33844	1.68565	3.44757	1.31916	1.48302	7.97298	0.75497
13	1.24800	1.32651	1.67063	3.48021	1.27986	1.43883	7.73541	0.75894
14	1.23839	1.31629	1.65776	3.51285	1.24349	1.39794	7.51558	0.76566
15	1.23005	1.30743	1.64660	3.54548	1.20986	1.36015	7.31237	0.77476
16	1.22276	1.29968	1.63683	3.57812	1.17882	1.32525	7.12478	0.78591
17	1.21632	1.29283	1.62822	3.61075	1.15021	1.29309	6.95185	0.79880
18	1.21060	1.28675	1.62056	3.64339	1.12389	1.26350	6.79277	0.81313
19	1.20548	1.28131	1.61371	3.67603	1.09973	1.23634	6.64675	0.82862
20	1.20833	1.27284	1.60304	3.70866	1.07762	1.21148	6.51311	0.84500
21	1.21606	1.27430	1.60488	3.74130	1.05746	1.18881	6.39124	0.86203
22	1.22308	1.27563	1.60655	3.77393	1.03914	1.16822	6.28055	0.87948
23	1.22950	1.27684	1.60808	3.80657	1.02260	1.14962	6.18056	0.89714
24	1.23538	1.27795	1.60947	3.83920	1.00775	1.13293	6.09079	0.91483
25	1.24079	1.27897	1.61076	3.87184	0.99452	1.11806	6.01086	0.93238
26	1.24579	1.27992	1.61195	3.90448	0.98287	1.10495	5.94041	0.94962
27	1.25041	1.28079	1.61305	3.93712	0.97273	1.09355	5.87913	0.96643
28	1.25470	1.28160	1.61407	3.96975	0.96406	1.08381	5.82674	0.98268
29	1.25870	1.28236	1.61502	4.00239	0.95683	1.07568	5.78303	0.99828
30	1.26243	1.28306	1.61591	4.03502	0.95100	1.06913	5.74780	1.01314
31	1.26592	1.28372	1.61674	4.06766	0.94655	1.06413	5.72091	1.02720
32	1.26920	1.28434	1.61752	4.10030	0.94346	1.06065	5.70224	1.04042
33	1.27227	1.28492	1.61825	4.13294	0.94172	1.05869	5.69170	1.05277
34	1.27516	1.28547	1.61894	4.16557	0.94131	1.05824	5.68925	1.06424
35	1.27789	1.28598	1.61959	4.19821	0.94224	1.05928	5.69489	1.07484
36	1.28047	1.28647	1.62020	4.23084	0.94452	1.06184	5.70862	1.08460
37	1.28291	1.28693	1.62078	4.26348	0.94814	1.06591	5.73053	1.09356
38	1.28521	1.28737	1.62133	4.29611	0.95313	1.07152	5.76069	1.10179
39	1.28740	1.28778	1.62185	4.32875	0.95951	1.07870	5.79924	1.10937
40	1.28949	1.28817	1.62235	4.36139	0.96731	1.08746	5.84635	1.11639
41	1.29146	1.28855	1.62282	4.39402	0.97655	1.09785	5.90222	1.12298
42	1.29335	1.28891	1.62327	4.42666	0.98728	1.10991	5.96708	1.12927
43	1.29515	1.28925	1.62370	4.45930	0.99955	1.12371	6.04123	1.13542
44	1.29686	1.28957	1.62411	4.49193	1.01341	1.13929	6.12499	1.14160
45	1.29850	1.28988	1.62450	4.52457	1.02892	1.15672	6.21874	1.14801
46	1.30007	1.29018	1.62487	4.55721	1.04615	1.17610	6.32290	1.15484
47	1.30157	1.29046	1.62523	4.58984	1.06518	1.19750	6.43794	1.16232
48	1.30301	1.29073	1.62557	4.62248	1.08611	1.22101	6.56438	1.17071
49	1.30403	1.33858	1.68584	4.65511	1.10901	1.24677	6.70282	1.20883
50	1.37760	1.38644	1.74611	4.68775	1.13401	1.27487	6.85390	1.24695
51	1.41489	1.43429	1.80637	4.72039	1.16121	1.30546	7.01834	1.28507
52	1.45218	1.48215	1.86664	4.75303	1.19077	1.33868	7.19696	1.32319
53	1.48948	1.53000	1.92691	4.78566	1.22281	1.37470	7.39059	1.36131
54	1.52677	1.57786	1.98718	4.81829	1.25749	1.41369	7.60022	1.39944
55	1.56407	1.62572	2.04745	4.85093	1.29500	1.45585	7.82692	1.43756
56	1.60136	1.67357	2.10772	4.88357	1.33552	1.50141	8.07181	1.47568
57	1.63865	1.72143	2.16799	4.91620	1.37926	1.55058	8.33621	1.51380
58	1.67595	1.76928	2.22826	4.94884	1.42646	1.60365	8.62149	1.55192
59	1.71324	1.81713	2.28853	4.98148	1.47738	1.66089	8.92921	1.59004
60	1.75053	1.86499	2.34880	5.01411	1.53228	1.72261	9.26106	1.62816
61	1.78783	1.91284	2.40907	5.04675	1.59149	1.78917	9.61888	1.66628
62	1.82512	1.96070	2.46934	5.07938	1.65533	1.86094	10.00473	1.70440
63	1.86242	2.00855	2.52961	5.11202	1.72417	1.93834	10.42085	1.74252
64	1.89971	2.05641	2.58988	5.14466	1.79844	2.02183	10.86970	1.78064
65	1.93700	2.10426	2.65015	5.17730	1.87856	2.11191	11.35398	1.81877

Jefferson 1996 Time Period 1 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	8.91316	10.08542	12.86631	15.82760	1.65438	2.28766	5.47575	15.39995
4	6.58465	7.51425	9.55548	13.01503	1.57068	2.17192	5.19870	12.98292
5	5.26593	6.03427	7.63222	11.29026	1.49252	2.06384	4.94001	11.19275
6	4.41948	5.07390	6.37681	10.04767	1.41950	1.96287	4.69834	9.84154
7	3.83119	4.40189	5.49580	9.07109	1.35125	1.86849	4.47241	8.80401
8	3.44794	3.95629	4.90483	8.35319	1.28740	1.78021	4.26110	7.99482
9	3.15087	3.60865	4.44555	7.72690	1.22766	1.69759	4.06335	7.35463
10	2.90943	3.32496	4.07355	7.16714	1.17171	1.62023	3.87819	6.84140
11	2.70848	3.08793	3.76542	6.66444	1.11930	1.54776	3.70472	6.42483
12	2.53791	2.88590	3.50525	6.21128	1.07018	1.47983	3.54212	6.08270
13	2.39070	2.71072	3.28188	5.80149	1.02412	1.41613	3.38965	5.79849
14	2.26181	2.55653	3.08725	5.42991	0.98090	1.35637	3.24660	5.55969
15	2.14754	2.41903	2.91542	5.09215	0.94033	1.30027	3.11232	5.35678
16	2.04514	2.29497	2.76191	4.78445	0.90223	1.24759	2.98622	5.18237
17	1.95246	2.18187	2.62331	4.50355	0.86643	1.19809	2.86775	5.03071
18	1.86788	2.07782	2.49696	4.24661	0.83279	1.15158	2.75640	4.89725
19	1.79009	1.98129	2.38079	4.01115	0.80116	1.10784	2.65172	4.77845
20	1.71574	1.90206	2.28531	3.80003	0.77141	1.06670	2.55325	4.67143
21	1.65063	1.83436	2.20108	3.61385	0.74342	1.02800	2.46060	4.57398
22	1.59102	1.77227	2.12397	3.44333	0.71708	0.99157	2.37341	4.48429
23	1.53621	1.71505	2.05301	3.28696	0.69228	0.95727	2.29132	4.40099
24	1.48558	1.66208	1.98738	3.14338	0.66892	0.92498	2.21402	4.32299
25	1.43863	1.61286	1.92646	3.01141	0.64692	0.89456	2.14120	4.24946
26	1.39495	1.56698	1.86970	2.88996	0.62620	0.86590	2.07261	4.17979
27	1.35418	1.52410	1.81667	2.77809	0.60667	0.83890	2.00798	4.11352
28	1.31601	1.48393	1.76699	2.67493	0.58827	0.81345	1.94707	4.05036
29	1.28018	1.44622	1.72037	2.57972	0.57093	0.78948	1.88968	3.99010
30	1.24647	1.41077	1.67654	2.49178	0.55459	0.76688	1.83559	3.93261
31	1.21468	1.37741	1.63529	2.41048	0.53919	0.74558	1.78462	3.87788
32	1.18464	1.34598	1.59643	2.33527	0.52468	0.72552	1.73660	3.82588
33	1.15621	1.31634	1.55980	2.26565	0.51101	0.70662	1.69135	3.77667
34	1.12925	1.28838	1.52525	2.20117	0.49813	0.68881	1.64873	3.73027
35	1.10364	1.26198	1.49266	2.14141	0.48601	0.67205	1.60861	3.68677
36	1.07928	1.23704	1.46190	2.08601	0.47460	0.65627	1.57084	3.64622
37	1.05607	1.21348	1.43287	2.03464	0.46386	0.64142	1.53531	3.60866
38	1.03393	1.19121	1.40547	1.98701	0.45377	0.62747	1.50190	3.57414
39	1.01279	1.17015	1.37959	1.94284	0.44428	0.61435	1.47051	3.54268
40	0.99256	1.15022	1.35517	1.90188	0.43538	0.60204	1.44104	3.51425
41	0.97319	1.13134	1.33208	1.86392	0.42704	0.59050	1.41341	3.48885
42	0.95462	1.11346	1.31027	1.82875	0.41922	0.57969	1.38753	3.46637
43	0.93679	1.09648	1.28963	1.79620	0.41190	0.56957	1.36333	3.44666
44	0.91965	1.08036	1.27008	1.76610	0.40507	0.56013	1.34072	3.42962
45	0.90315	1.06500	1.25153	1.73831	0.39871	0.55133	1.31965	3.41500
46	0.88724	1.05034	1.23388	1.71270	0.39279	0.54314	1.30006	3.40252
47	0.87187	1.03629	1.21704	1.68914	0.38729	0.53555	1.28188	3.39183
48	0.85726	1.02288	1.20095	1.66758	0.38222	0.52852	1.26507	3.38248
49	0.85541	1.02100	1.19848	1.64838	0.37754	0.52205	1.24958	3.38248
50	0.85367	1.01924	1.19616	1.63113	0.37324	0.51611	1.23537	3.38248
51	0.85202	1.01757	1.19396	1.61574	0.36932	0.51069	1.22239	3.38248
52	0.85047	1.01599	1.19188	1.60213	0.36576	0.50577	1.21061	3.38248
53	0.84899	1.01449	1.18992	1.59025	0.36256	0.50134	1.20001	3.38248
54	0.84759	1.01307	1.18806	1.58003	0.35970	0.49739	1.19054	3.38248
55	0.84626	1.01172	1.18629	1.57142	0.35718	0.49390	1.18219	3.38248
56	0.87736	1.05400	1.24224	1.56438	0.35498	0.49086	1.17493	3.50160
57	0.90851	1.09634	1.29828	1.55889	0.35311	0.48828	1.16874	3.62073
58	0.93973	1.13874	1.35439	1.55491	0.35156	0.48614	1.16361	3.73985
59	0.97100	1.18119	1.41057	1.55244	0.35033	0.48443	1.15952	3.85897
60	1.00231	1.22370	1.46683	1.55146	0.34940	0.48315	1.15647	3.97809
61	1.03368	1.26625	1.52315	1.55197	0.34879	0.48230	1.15443	4.09721
62	1.06509	1.30885	1.57952	1.55399	0.34848	0.48188	1.15342	4.21633
63	1.09654	1.35149	1.63596	1.55752	0.34848	0.48188	1.15342	4.33546
64	1.12803	1.39416	1.69244	1.56258	0.34879	0.48230	1.15443	4.45458
65	1.15956	1.43688	1.74898	1.56922	0.34940	0.48315	1.15647	4.57370

Jefferson 1996 Time Period 1 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	85.03990	99.53648	129.00552	171.92340	5.39228	6.10980	38.25746	155.49950
4	65.40640	76.63390	99.20956	157.07907	4.96959	5.63087	35.25856	124.01422
5	53.53584	62.62712	80.60826	143.83243	4.58839	5.19894	32.55399	101.28938
6	45.58891	53.19710	67.93085	131.99309	4.24413	4.80888	30.11156	84.52023
7	39.90250	46.43750	58.78349	121.39494	3.93287	4.45620	27.90314	71.89357
8	35.63702	41.37068	51.90735	111.89368	3.65106	4.13689	25.90379	62.20830
9	32.32228	37.44196	46.57367	103.36319	3.39563	3.84747	24.09151	54.65146
10	29.67436	34.31314	42.33095	95.69336	3.16381	3.58481	22.44684	48.66087
11	27.51163	31.76640	38.88487	88.78781	2.95320	3.34617	20.95255	43.84062
12	25.71259	29.65498	36.03578	82.56203	2.76162	3.12910	19.59334	39.90669
13	24.19293	27.87682	33.64381	76.94186	2.58718	2.93144	18.35571	36.65199
14	22.89227	26.35846	31.60828	71.86209	2.42817	2.75128	17.22757	33.92343
15	21.76630	25.04591	29.85503	67.26567	2.28309	2.58688	16.19820	31.60617
16	20.78177	23.89876	28.32848	63.10175	2.15058	2.43675	15.25812	29.61305
17	19.91330	22.88600	26.98616	59.32610	2.02946	2.29951	14.39876	27.87738
18	19.14111	21.98369	25.79523	55.89915	1.91864	2.17395	13.61255	26.34764
19	18.44969	21.17310	24.72998	52.78612	1.81718	2.05899	12.89270	24.98370
20	17.71179	20.45117	23.82622	49.95633	1.72422	1.95366	12.23318	23.75449
21	16.92764	19.61934	22.85313	47.38229	1.63900	1.85709	11.62853	22.63545
22	16.21375	18.85806	21.96550	45.03987	1.56083	1.76852	11.07390	21.60783
23	15.56084	18.15781	21.15149	42.90758	1.48909	1.68724	10.56495	20.65671
24	14.96126	17.51089	20.40161	40.96625	1.42324	1.61263	10.09774	19.77071
25	14.40863	16.91112	19.70807	39.19887	1.36278	1.54412	9.66877	18.94121
26	13.89759	16.35332	19.06442	37.59039	1.30726	1.48122	9.27490	18.16148
27	13.42360	15.83332	18.46541	36.12730	1.25630	1.42346	8.91327	17.42665
28	12.98283	15.34762	17.90660	34.79758	1.20951	1.37046	8.58135	16.73296
29	12.57195	14.89328	17.38431	33.59067	1.16659	1.32183	8.27684	16.07784
30	12.18813	14.46782	16.89546	32.49701	1.12724	1.27724	7.99768	15.45945
31	11.82891	14.06913	16.43738	31.50818	1.09121	1.23641	7.74201	14.87624
32	11.49211	13.69534	16.00778	30.61676	1.05825	1.19907	7.50816	14.32718
33	11.17585	13.34480	15.60470	29.81607	1.02816	1.16497	7.29465	13.81181
34	10.87845	13.01607	15.22637	29.10028	1.00074	1.13390	7.10011	13.32907
35	10.59842	12.70779	14.87121	28.46420	0.97583	1.10567	6.92335	12.87880
36	10.33442	12.41872	14.53780	27.90334	0.95327	1.08011	6.76330	12.45991
37	10.08526	12.14775	14.22487	27.41379	0.93293	1.05707	6.61897	12.07227
38	9.84986	11.89382	13.93118	26.99219	0.91468	1.03639	6.48953	11.71464
39	9.62723	11.65588	13.65557	26.63556	0.89843	1.01797	6.37421	11.38624
40	9.41647	11.43300	13.39700	26.34155	0.88407	1.00171	6.27235	11.08604
41	9.21676	11.22423	13.15440	26.10812	0.87153	0.98750	6.18335	10.81281
42	9.02732	11.02864	12.92668	25.93376	0.86073	0.97526	6.10672	10.56485
43	8.84745	10.84528	12.71289	25.81735	0.85161	0.96493	6.04203	10.34063
44	8.67646	10.67322	12.51194	25.75803	0.84412	0.95644	5.98891	10.13789
45	8.51372	10.51144	12.32281	25.75549	0.83822	0.94976	5.94708	9.95453
46	8.35858	10.35881	12.14436	25.80960	0.83388	0.94485	5.91629	9.78790
47	8.21044	10.21416	11.97537	25.92082	0.83108	0.94167	5.89639	9.63473
48	8.06868	10.07616	11.81464	26.08986	0.82979	0.94021	5.88725	9.49179
49	8.06868	10.07616	11.81464	26.31786	0.83002	0.94046	5.88885	9.49179
50	8.06868	10.07616	11.81464	26.60626	0.83175	0.94243	5.90117	9.49179
51	8.06868	10.07616	11.81464	26.95711	0.83501	0.94612	5.92428	9.49179
52	8.06868	10.07616	11.81464	27.37276	0.83981	0.95156	5.95833	9.49179
53	8.06868	10.07616	11.81464	27.85596	0.84617	0.95877	6.00349	9.49179
54	8.06868	10.07616	11.81464	28.41017	0.85414	0.96780	6.06000	9.49179
55	8.06868	10.07616	11.81464	29.03920	0.86375	0.97869	6.12820	9.49179
56	9.19423	11.72222	13.90552	29.74754	0.87506	0.99150	6.20845	11.77769
57	10.31978	13.36827	15.99638	30.54027	0.88814	1.00632	6.30120	14.06359
58	11.44534	15.01433	18.08725	31.42320	0.90305	1.02321	6.40699	16.34947
59	12.57089	16.66035	20.17810	32.40286	0.91988	1.04228	6.52643	18.63536
60	13.69645	18.30641	22.26895	33.48665	0.93874	1.06365	6.66020	20.92125
61	14.82199	19.95245	24.35985	34.68289	0.95972	1.08743	6.80910	23.20712
62	15.94753	21.59850	26.45070	36.00099	0.98297	1.11376	6.97401	25.49298
63	17.07307	23.24452	28.54160	37.45151	1.00861	1.14281	7.15592	27.77892
64	18.19862	24.89058	30.63248	39.04630	1.03680	1.17476	7.35595	30.06480
65	19.32416	26.53664	32.72334	40.79846	1.06772	1.20980	7.57536	32.35069

Jefferson 1996 Time Period 1 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	2.22371	2.39495	2.65602	4.37022	2.76132	3.11727	23.65694	0.91266
4	2.04268	2.19970	2.45155	4.41545	2.64502	2.98598	22.66058	0.87295
5	1.93305	2.08191	2.32909	4.46067	2.53722	2.86428	21.73701	0.83999
6	1.85925	2.00316	2.24783	4.50589	2.43727	2.75145	20.88072	0.81327
7	1.80604	1.94694	2.19024	4.55112	2.34459	2.64681	20.08667	0.79230
8	1.76579	1.90496	2.14754	4.59634	2.25863	2.54978	19.35028	0.77658
9	1.73425	1.87262	2.11485	4.64156	2.17892	2.45979	18.66737	0.76565
10	1.70886	1.84711	2.08921	4.68679	2.10501	2.37635	18.03415	0.75908
11	1.68799	1.82666	2.06874	4.73201	2.03649	2.29901	17.44716	0.75643
12	1.67056	1.81004	2.05217	4.77723	1.97301	2.22733	16.90327	0.75729
13	1.65579	1.79642	2.03861	4.82246	1.91422	2.16097	16.39961	0.76127
14	1.64314	1.78517	2.02744	4.86768	1.85982	2.09956	15.93357	0.76800
15	1.63221	1.77584	2.01816	4.91290	1.80953	2.04279	15.50276	0.77713
16	1.62268	1.76808	2.01042	4.95813	1.76311	1.99038	15.10504	0.78832
17	1.61434	1.76160	2.00395	5.00335	1.72031	1.94207	14.73843	0.80125
18	1.60698	1.75620	1.99851	5.04858	1.68095	1.89763	14.40115	0.81563
19	1.60047	1.75168	1.99394	5.09380	1.64481	1.85684	14.09158	0.83116
20	1.60154	1.75023	1.99299	5.13902	1.61175	1.81951	13.80827	0.84759
21	1.61059	1.76198	2.00660	5.18424	1.58159	1.78546	13.54989	0.86467
22	1.61889	1.77290	2.01920	5.22946	1.55420	1.75454	13.31522	0.88217
23	1.62655	1.78308	2.03088	5.27469	1.52945	1.72660	13.10323	0.89989
24	1.63364	1.79259	2.04176	5.31991	1.50724	1.70153	12.91292	0.91764
25	1.64025	1.80150	2.05192	5.36514	1.48746	1.67920	12.74346	0.93524
26	1.64641	1.80985	2.06142	5.41036	1.47002	1.65951	12.59410	0.95253
27	1.65220	1.81770	2.07034	5.45558	1.45486	1.64239	12.46417	0.96939
28	1.65765	1.82508	2.07872	5.50081	1.44189	1.62776	12.35311	0.98569
29	1.66280	1.83202	2.08661	5.54603	1.43108	1.61555	12.26045	1.00134
30	1.66768	1.83856	2.09406	5.59125	1.42236	1.60571	12.18576	1.01624
31	1.67232	1.84472	2.10111	5.63648	1.41571	1.59819	12.12874	1.03035
32	1.67675	1.85053	2.10779	5.68170	1.41108	1.59298	12.08915	1.04361
33	1.68100	1.85602	2.11413	5.72693	1.40847	1.59003	12.06681	1.05600
34	1.68508	1.86120	2.12018	5.77215	1.40787	1.58935	12.06161	1.06751
35	1.68901	1.86611	2.12596	5.81737	1.40926	1.59093	12.07357	1.07814
36	1.69282	1.87076	2.13151	5.86259	1.41266	1.59476	12.10269	1.08793
37	1.69652	1.87518	2.13685	5.90782	1.41809	1.60088	12.14914	1.09692
38	1.70013	1.87940	2.14202	5.95304	1.42555	1.60931	12.21309	1.10517
39	1.70366	1.88344	2.14704	5.99826	1.43509	1.62008	12.29481	1.11277
40	1.70714	1.88734	2.15196	6.04349	1.44675	1.63324	12.39469	1.11981
41	1.71057	1.89110	2.15679	6.08871	1.46057	1.64885	12.51312	1.12642
42	1.71398	1.89478	2.16159	6.13394	1.47662	1.66697	12.65064	1.13274
43	1.71738	1.89839	2.16637	6.17916	1.49497	1.68768	12.80786	1.13891
44	1.72078	1.90197	2.17117	6.22438	1.51570	1.71108	12.98543	1.14511
45	1.72421	1.90555	2.17603	6.26961	1.53890	1.73727	13.18418	1.15153
46	1.72768	1.90916	2.18099	6.31483	1.56467	1.76637	13.40501	1.15838
47	1.73120	1.91286	2.18608	6.36005	1.59314	1.79850	13.64889	1.16589
48	1.73479	1.91666	2.19135	6.40528	1.62443	1.83383	13.91696	1.17430
49	1.79909	1.99323	2.28149	6.45050	1.65869	1.87250	14.21047	1.21254
50	1.86340	2.06980	2.37164	6.49573	1.69608	1.91471	14.53077	1.25078
51	1.92770	2.14637	2.46178	6.54095	1.73677	1.96065	14.87940	1.28901
52	1.99201	2.22295	2.55193	6.58617	1.78097	2.01054	15.25807	1.32725
53	2.05632	2.29952	2.64207	6.63139	1.82889	2.06464	15.66859	1.36549
54	2.12062	2.37609	2.73221	6.67662	1.88076	2.12320	16.11301	1.40373
55	2.18493	2.45267	2.82236	6.72184	1.93686	2.18653	16.59363	1.44196
56	2.24923	2.52924	2.91250	6.76706	1.99746	2.25495	17.11281	1.48020
57	2.31354	2.60581	3.00265	6.81229	2.06289	2.32881	17.67336	1.51844
58	2.37785	2.68238	3.09279	6.85751	2.13349	2.40851	18.27815	1.55668
59	2.44215	2.75895	3.18294	6.90273	2.20964	2.49447	18.93054	1.59492
60	2.50646	2.83553	3.27308	6.94796	2.29175	2.58717	19.63409	1.63315
61	2.57076	2.91210	3.36322	6.99318	2.38031	2.68714	20.39268	1.67139
62	2.63507	2.98867	3.45337	7.03840	2.47579	2.79493	21.21071	1.70963
63	2.69938	3.06524	3.54351	7.08363	2.57876	2.91117	22.09290	1.74787
64	2.76368	3.14181	3.63366	7.12885	2.68983	3.03657	23.04448	1.78610
65	2.82799	3.21839	3.72380	7.17408	2.80968	3.17185	24.07120	1.82434

Jefferson 1996 Time Period 2 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	11.26574	11.82121	15.02358	21.45724	1.65438	2.28766	5.47575	17.23112
4	8.13220	8.60556	10.85448	16.87999	1.57068	2.17192	5.19870	14.83976
5	6.40653	6.81298	8.52629	14.28680	1.49252	2.06384	4.94001	13.06859
6	5.32049	5.67511	7.04675	12.53833	1.41950	1.96287	4.69834	11.73172
7	4.57664	4.89164	6.02806	11.23268	1.35125	1.86849	4.47241	10.70520
8	4.12499	4.39468	5.37895	10.36001	1.28740	1.78021	4.26110	9.90459
9	3.77500	4.01055	4.87889	9.61264	1.22766	1.69759	4.06335	9.27119
10	3.48745	3.69849	4.47495	8.94853	1.17171	1.62023	3.87819	8.76341
11	3.24536	3.43901	4.14131	8.35434	1.11930	1.54776	3.70472	8.35126
12	3.03738	3.21898	3.86045	7.81989	1.07018	1.47983	3.54212	8.01276
13	2.85562	3.02920	3.62010	7.33709	1.02412	1.41613	3.38965	7.73156
14	2.69442	2.86307	3.41140	6.89932	0.98090	1.35637	3.24660	7.49530
15	2.54965	2.71573	3.22784	6.50111	0.94033	1.30027	3.11232	7.29454
16	2.41819	2.58351	3.06450	6.13782	0.90223	1.24759	2.98622	7.12198
17	2.29765	2.46362	2.91764	5.80551	0.86643	1.19809	2.86775	6.97193
18	2.18619	2.35390	2.78434	5.50077	0.83279	1.15158	2.75640	6.83989
19	2.08235	2.25264	2.66232	5.22064	0.80116	1.10784	2.65172	6.72235
20	1.98932	2.16823	2.56108	4.97288	0.77141	1.06670	2.55325	6.61647
21	1.91612	2.09294	2.46871	4.76038	0.74342	1.02800	2.46060	6.52005
22	1.84896	2.02383	2.38414	4.56569	0.71708	0.99157	2.37341	6.43132
23	1.78702	1.96007	2.30632	4.38705	0.69228	0.95727	2.29132	6.34890
24	1.72967	1.90098	2.23437	4.22292	0.66892	0.92498	2.21402	6.27172
25	1.67635	1.84601	2.16758	4.07193	0.64692	0.89456	2.14120	6.19898
26	1.62660	1.79472	2.10536	3.93283	0.62620	0.86590	2.07261	6.13004
27	1.58003	1.74673	2.04722	3.80455	0.60667	0.83890	2.00798	6.06448
28	1.53631	1.70173	1.99277	3.68612	0.58827	0.81345	1.94707	6.00198
29	1.49516	1.65945	1.94166	3.57664	0.57093	0.78948	1.88968	5.94237
30	1.45632	1.61967	1.89361	3.47536	0.55459	0.76688	1.83559	5.88549
31	1.41959	1.58220	1.84836	3.38156	0.53919	0.74558	1.78462	5.83134
32	1.38479	1.54687	1.80573	3.29461	0.52468	0.72552	1.73660	5.77989
33	1.35174	1.51354	1.76551	3.21396	0.51101	0.70662	1.69135	5.73120
34	1.32030	1.48208	1.72754	3.13908	0.49813	0.68881	1.64873	5.68529
35	1.29035	1.45236	1.69169	3.06952	0.48601	0.67205	1.60861	5.64225
36	1.26177	1.42428	1.65782	3.00486	0.47460	0.65627	1.57084	5.60214
37	1.23446	1.39774	1.62581	2.94474	0.46386	0.64142	1.53531	5.56498
38	1.20832	1.37264	1.59555	2.88882	0.45377	0.62747	1.50190	5.53082
39	1.18327	1.34890	1.56693	2.83678	0.44428	0.61435	1.47051	5.49969
40	1.15923	1.32643	1.53986	2.78836	0.43538	0.60204	1.44104	5.47156
41	1.13613	1.30514	1.51424	2.74330	0.42704	0.59050	1.41341	5.44644
42	1.11391	1.28497	1.48997	2.70139	0.41922	0.57969	1.38753	5.42420
43	1.09251	1.26582	1.46695	2.66241	0.41190	0.56957	1.36333	5.40469
44	1.07186	1.24762	1.44511	2.62619	0.40507	0.56013	1.34072	5.38783
45	1.05191	1.23029	1.42433	2.59255	0.39871	0.55133	1.31965	5.37337
46	1.03261	1.21372	1.40453	2.56136	0.39279	0.54314	1.30006	5.36103
47	1.01391	1.19785	1.38560	2.53248	0.38729	0.53555	1.28188	5.35045
48	0.99615	1.18264	1.36744	2.50581	0.38222	0.52852	1.26507	5.34120
49	0.99291	1.17935	1.36300	2.48162	0.37754	0.52205	1.24958	5.34120
50	0.98985	1.17624	1.35882	2.45973	0.37324	0.51611	1.23537	5.34120
51	0.98696	1.17331	1.35487	2.44006	0.36932	0.51069	1.22239	5.34120
52	0.98423	1.17054	1.35114	2.42248	0.36576	0.50577	1.21061	5.34120
53	0.98165	1.16792	1.34762	2.40692	0.36256	0.50134	1.20001	5.34120
54	0.97921	1.16543	1.34429	2.39331	0.35970	0.49739	1.19054	5.34120
55	0.97689	1.16308	1.34113	2.38158	0.35718	0.49390	1.18219	5.34120
56	1.00859	1.20734	1.39783	2.37168	0.35498	0.49086	1.17493	5.45905
57	1.04040	1.25172	1.45469	2.36357	0.35311	0.48828	1.16874	5.57691
58	1.07231	1.29620	1.51168	2.35721	0.35156	0.48614	1.16361	5.69477
59	1.10432	1.34078	1.56881	2.35257	0.35033	0.48443	1.15952	5.81263
60	1.13642	1.38546	1.62606	2.34965	0.34940	0.48315	1.15647	5.93049
61	1.16860	1.43021	1.68343	2.34844	0.34879	0.48230	1.15443	6.04834
62	1.20086	1.47505	1.74091	2.34893	0.34848	0.48188	1.15342	6.16620
63	1.23320	1.51996	1.79849	2.35114	0.34848	0.48188	1.15342	6.28406
64	1.26560	1.56494	1.85617	2.35508	0.34879	0.48230	1.15443	6.40192
65	1.29807	1.60999	1.91393	2.36079	0.34940	0.48315	1.15647	6.51977

Jefferson 1996 Time Period 2 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	91.90079	109.42072	142.25581	215.31358	5.39228	6.10980	38.25746	188.99744
4	70.59222	84.23921	109.33018	196.72284	4.96959	5.63087	35.25856	150.72957
5	57.68639	68.76064	88.70755	180.13301	4.58839	5.19894	32.55399	123.10927
6	49.03850	58.31416	74.62898	165.30562	4.24413	4.80888	30.11156	102.72772
7	42.84839	50.82027	64.46387	152.03273	3.93287	4.45620	27.90314	87.38103
8	38.20522	45.20480	56.82234	140.13353	3.65106	4.13689	25.90379	75.60933
9	34.59792	40.85492	50.89694	129.45012	3.39563	3.84747	24.09151	66.42461
10	31.71742	37.39532	46.18619	119.84456	3.16381	3.58481	22.44684	59.14346
11	29.36578	34.58356	42.36252	111.19621	2.95320	3.34617	20.95255	53.28484
12	27.41052	32.25589	39.20348	103.39911	2.76162	3.12910	19.59334	48.50346
13	25.75958	30.29817	36.55307	96.36053	2.58718	2.93144	18.35571	44.54764
14	24.34703	28.62822	34.29898	89.99872	2.42817	2.75128	17.22757	41.23129
15	23.12450	27.18559	32.35846	84.24225	2.28309	2.58688	16.19820	38.41486
16	22.05568	25.92496	30.66946	79.02740	2.15058	2.43675	15.25812	35.99239
17	21.11281	24.81161	29.18465	74.29889	2.02946	2.29951	14.39876	33.88278
18	20.27434	23.81880	27.86739	70.00705	1.91864	2.17395	13.61255	32.02344
19	19.52333	22.92555	26.68906	66.10835	1.81718	2.05899	12.89270	30.36572
20	18.73273	22.14250	25.70580	62.56435	1.72422	1.95366	12.23318	28.87169
21	17.90236	21.25020	24.65602	59.34070	1.63900	1.85709	11.62853	27.51163
22	17.14595	20.43150	23.69791	56.40709	1.56083	1.76852	11.07390	26.26262
23	16.45374	19.67642	22.81873	53.73665	1.48909	1.68724	10.56495	25.10663
24	15.81766	18.97693	22.00827	51.30536	1.42324	1.61263	10.09774	24.02971
25	15.23100	18.32658	21.25816	49.09195	1.36278	1.54412	9.66877	23.02151
26	14.68815	17.72020	20.56152	47.07751	1.30726	1.48122	9.27490	22.07382
27	14.18437	17.15358	19.91278	45.24515	1.25630	1.42346	8.91327	21.18071
28	13.71565	16.62328	19.30721	43.57983	1.20951	1.37046	8.58135	20.33755
29	13.27855	16.12645	18.74097	42.06833	1.16659	1.32183	8.27684	19.54134
30	12.87011	15.66069	18.21080	40.69864	1.12724	1.27724	7.99768	18.78973
31	12.48779	15.22400	17.71391	39.46025	1.09121	1.23641	7.74201	18.08089
32	12.12933	14.81459	17.24792	38.34383	1.05825	1.19907	7.50816	17.41354
33	11.79278	14.43087	16.81079	37.34108	1.02816	1.16497	7.29465	16.78716
34	11.47639	14.07145	16.40065	36.44463	1.00074	1.13390	7.10011	16.20044
35	11.17863	13.73501	16.01584	35.64803	0.97583	1.10567	6.92335	15.63317
36	10.89808	13.42032	15.65491	34.94560	0.95327	1.08011	6.76330	15.14405
37	10.63351	13.12624	15.31650	34.33252	0.93293	1.05707	6.61897	14.67289
38	10.38378	12.85168	14.99929	33.80450	0.91468	1.03639	6.48953	14.23823
39	10.14785	12.59554	14.70203	33.35786	0.89843	1.01797	6.37421	13.83908
40	9.92476	12.35681	14.42360	32.98964	0.88407	1.00171	6.27235	13.47421
41	9.71365	12.13443	14.16286	32.69733	0.87153	0.98750	6.18335	13.14213
42	9.51367	11.92734	13.91859	32.47894	0.86073	0.97526	6.10672	12.84075
43	9.32405	11.73446	13.68975	32.33316	0.85161	0.96493	6.04203	12.56822
44	9.14406	11.55464	13.47510	32.25887	0.84412	0.95644	5.98891	12.32181
45	8.97298	11.38663	13.27351	32.25568	0.83822	0.94976	5.94708	12.09895
46	8.81008	11.22900	13.08366	32.32346	0.83388	0.94485	5.91629	11.89643
47	8.65465	11.08021	12.90414	32.46274	0.83108	0.94167	5.89639	11.71026
48	8.50598	10.93850	12.73356	32.67444	0.82979	0.94021	5.88725	11.53653
49	8.50598	10.93850	12.73356	32.95998	0.83002	0.94046	5.88885	11.53653
50	8.50598	10.93850	12.73356	33.32118	0.83175	0.94243	5.90117	11.53653
51	8.50598	10.93850	12.73356	33.76057	0.83501	0.94612	5.92428	11.53653
52	8.50598	10.93850	12.73356	34.28113	0.83981	0.95156	5.95833	11.53653
53	8.50598	10.93850	12.73356	34.88626	0.84617	0.95877	6.00349	11.53653
54	8.50598	10.93850	12.73356	35.58037	0.85414	0.96780	6.06000	11.53653
55	8.50598	10.93850	12.73356	36.36813	0.86375	0.97869	6.12820	11.53653
56	9.73553	12.79402	15.04804	37.25526	0.87506	0.99150	6.20845	14.31485
57	10.96508	14.64954	17.36247	38.24806	0.88814	1.00632	6.30120	17.09319
58	12.19463	16.50504	19.67694	39.35382	0.90305	1.02321	6.40699	19.87149
59	13.42418	18.36053	21.99141	40.58073	0.91988	1.04228	6.52643	22.64983
60	14.65372	20.21606	24.30586	41.93803	0.93874	1.06365	6.66020	25.42812
61	15.88325	22.07156	26.62035	43.43622	0.95972	1.08743	6.80910	28.20644
62	17.11279	23.92708	28.93480	45.08698	0.98297	1.11376	6.97401	30.98476
63	18.34235	25.78256	31.24930	46.90358	1.00861	1.14281	7.15592	33.76311
64	19.57188	27.63811	33.56377	48.90085	1.03680	1.17476	7.35595	36.54140
65	20.80141	29.49361	35.87822	51.09525	1.06772	1.20980	7.57536	39.31975

Jefferson 1996 Time Period 3 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	11.79211	12.19258	15.50779	22.63002	1.65438	2.28766	5.47575	17.45241
4	8.47240	8.82990	11.13873	17.63821	1.57068	2.17192	5.19870	15.06276
5	6.65333	6.96727	8.71675	14.84396	1.49252	2.06384	4.94001	13.29286
6	5.51263	5.79028	7.18560	12.98041	1.41950	1.96287	4.69834	11.95695
7	4.73349	4.98259	6.13540	11.60135	1.35125	1.86849	4.47241	10.93117
8	4.26676	4.47548	5.47368	10.69630	1.28740	1.78021	4.26110	10.13113
9	3.90504	4.08432	4.96493	9.92410	1.22766	1.69759	4.06335	9.49819
10	3.60717	3.76682	4.55420	9.23873	1.17171	1.62023	3.87819	8.99077
11	3.35577	3.50309	4.21517	8.62601	1.11930	1.54776	3.70472	8.57892
12	3.13926	3.27967	3.92997	8.07512	1.07018	1.47983	3.54212	8.24067
13	2.94955	3.08719	3.68608	7.57757	1.02412	1.41613	3.38965	7.95967
14	2.78087	2.91888	3.47447	7.12642	0.98090	1.35637	3.24660	7.72357
15	2.62897	2.76977	3.28850	6.71595	0.94033	1.30027	3.11232	7.52296
16	2.49069	2.63613	3.12318	6.34136	0.90223	1.24759	2.98622	7.35053
17	2.36357	2.51509	2.97466	5.99854	0.86643	1.19809	2.86775	7.20058
18	2.24574	2.40444	2.83999	5.68399	0.83279	1.15158	2.75640	7.06864
19	2.13571	2.30245	2.71684	5.39465	0.80116	1.10784	2.65172	6.95118
20	2.03833	2.21705	2.61433	5.13953	0.77141	1.06670	2.55325	6.84538
21	1.96346	2.14013	2.52008	4.92215	0.74342	1.02800	2.46060	6.74903
22	1.89473	2.06950	2.43378	4.72297	0.71708	0.99157	2.37341	6.66036
23	1.83134	2.00431	2.35435	4.54020	0.69228	0.95727	2.29132	6.57800
24	1.77259	1.94388	2.28090	4.37226	0.66892	0.92498	2.21402	6.50088
25	1.71796	1.88766	2.21272	4.21772	0.64692	0.89456	2.14120	6.42818
26	1.66696	1.83518	2.14919	4.07534	0.62620	0.86590	2.07261	6.35930
27	1.61920	1.78606	2.08983	3.94400	0.60667	0.83890	2.00798	6.29378
28	1.57434	1.73998	2.03422	3.82270	0.58827	0.81345	1.94707	6.23133
29	1.53208	1.69668	1.98202	3.71056	0.57093	0.78948	1.88968	6.17175
30	1.49219	1.65593	1.93292	3.60676	0.55459	0.76688	1.83559	6.11492
31	1.45445	1.61753	1.88669	3.51060	0.53919	0.74558	1.78462	6.06081
32	1.41866	1.58132	1.84311	3.42144	0.52468	0.72552	1.73660	6.00939
33	1.38465	1.54714	1.80199	3.33869	0.51101	0.70662	1.69135	5.96074
34	1.35230	1.51486	1.76317	3.26183	0.49813	0.68881	1.64873	5.91487
35	1.32145	1.48437	1.72649	3.19040	0.48601	0.67205	1.60861	5.87186
36	1.29200	1.45554	1.69182	3.12398	0.47460	0.65627	1.57084	5.83177
37	1.26383	1.42828	1.65904	3.06217	0.46386	0.64142	1.53531	5.79464
38	1.23687	1.40249	1.62805	3.00464	0.45377	0.62747	1.50190	5.76051
39	1.21101	1.37809	1.59871	2.95108	0.44428	0.61435	1.47051	5.72940
40	1.18618	1.35498	1.57095	2.90120	0.43538	0.60204	1.44104	5.70129
41	1.16231	1.33308	1.54466	2.85476	0.42704	0.59050	1.41341	5.67618
42	1.13934	1.31231	1.51974	2.81152	0.41922	0.57969	1.38753	5.65395
43	1.11719	1.29259	1.49609	2.77127	0.41190	0.56957	1.36333	5.63446
44	1.09581	1.27384	1.47363	2.73383	0.40507	0.56013	1.34072	5.61762
45	1.07514	1.25597	1.45226	2.69903	0.39871	0.55133	1.31965	5.60316
46	1.05514	1.23888	1.43187	2.66672	0.39279	0.54314	1.30006	5.59083
47	1.03574	1.22250	1.41236	2.63677	0.38729	0.53555	1.28188	5.58026
48	1.01733	1.20681	1.39365	2.60906	0.38222	0.52852	1.26507	5.57102
49	1.01376	1.20318	1.38875	2.58379	0.37754	0.52205	1.24958	5.57102
50	1.01039	1.19976	1.38413	2.56092	0.37324	0.51611	1.23537	5.57102
51	1.00722	1.19653	1.37977	2.54031	0.36932	0.51069	1.22239	5.57102
52	1.00422	1.19348	1.37566	2.52186	0.36576	0.50577	1.21061	5.57102
53	1.00138	1.19060	1.37177	2.50550	0.36256	0.50134	1.20001	5.57102
54	0.99869	1.18786	1.36809	2.49114	0.35970	0.49739	1.19054	5.57102
55	0.99614	1.18528	1.36460	2.47871	0.35718	0.49390	1.18219	5.57102
56	1.02784	1.22975	1.42133	2.46816	0.35498	0.49086	1.17493	5.68879
57	1.05966	1.27435	1.47822	2.45945	0.35311	0.48828	1.16874	5.80656
58	1.09160	1.31906	1.53527	2.45254	0.35156	0.48614	1.16361	5.92434
59	1.12364	1.36388	1.59247	2.44739	0.35033	0.48443	1.15952	6.04211
60	1.15578	1.40880	1.64980	2.44400	0.34940	0.48315	1.15647	6.15988
61	1.18801	1.45381	1.70726	2.44235	0.34879	0.48230	1.15443	6.27766
62	1.22033	1.49892	1.76484	2.44245	0.34848	0.48188	1.15342	6.39543
63	1.25273	1.54410	1.82254	2.44430	0.34848	0.48188	1.15342	6.51320
64	1.28520	1.58937	1.88033	2.44793	0.34879	0.48230	1.15443	6.63098
65	1.31775	1.63470	1.93823	2.45335	0.34940	0.48315	1.15647	6.74875

Jefferson 1996 Time Period 3 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	92.96280	110.97649	144.28401	221.03232	5.39228	6.10980	38.25746	193.69504
4	71.39450	85.43477	110.87682	201.94778	4.96959	5.63087	35.25856	154.47600
5	58.32846	69.72446	89.94496	184.91734	4.58839	5.19894	32.55399	126.16920
6	49.57227	59.11826	75.65262	169.69614	4.24413	4.80888	30.11156	105.28107
7	43.30437	51.50908	65.33238	156.07069	3.93287	4.45620	27.90314	89.55292
8	38.60287	45.80748	57.57419	143.85545	3.65106	4.13689	25.90379	77.48860
9	34.5041	41.39145	51.55856	132.88832	3.39563	3.84747	24.09151	68.07561
10	32.03398	37.87990	46.77634	123.02763	3.16381	3.58481	22.44684	60.61348
11	29.65317	35.02644	42.89496	114.14958	2.95320	3.34617	20.95255	54.60925
12	27.67374	32.66475	39.68848	106.14537	2.76162	3.12910	19.59334	49.70900
13	26.00250	30.67876	36.99846	98.91988	2.58718	2.93144	18.35571	45.65485
14	24.57263	28.98491	34.71086	92.38904	2.42817	2.75128	17.22757	42.25610
15	23.33516	27.52176	32.74158	86.47971	2.28309	2.58688	16.19820	39.36964
16	22.25327	26.24323	31.02762	81.12639	2.15058	2.43675	15.25812	36.88695
17	21.29889	25.11401	29.52090	76.27225	2.02946	2.29951	14.39876	34.72493
18	20.45016	24.10690	28.18423	71.86646	1.91864	2.17395	13.61255	32.81944
19	19.68991	23.20064	26.98851	67.86421	1.81718	2.05899	12.89270	31.12048
20	18.89117	22.40807	25.99330	64.22607	1.72422	1.95366	12.23318	29.58926
21	18.05365	21.50636	24.93201	60.91679	1.63900	1.85709	11.62853	28.19545
22	17.29065	20.67879	23.96333	57.90529	1.56083	1.76852	11.07390	26.91541
23	16.59238	19.91519	23.07437	55.16388	1.48909	1.68724	10.56495	25.73062
24	15.95065	19.20755	22.25485	52.66801	1.42324	1.61263	10.09774	24.62698
25	15.35873	18.54938	21.49629	50.39583	1.36278	1.54412	9.66877	23.59372
26	14.81097	17.93547	20.79173	48.32790	1.30726	1.48122	9.27490	22.62248
27	14.30259	17.36163	20.13556	46.44687	1.25630	1.42346	8.91327	21.70712
28	13.82955	16.82443	19.52303	44.73729	1.20951	1.37046	8.58135	20.84306
29	13.38840	16.32103	18.95024	43.18565	1.16659	1.32183	8.27684	20.02702
30	12.97617	15.84903	18.41391	41.77962	1.12724	1.27724	7.99768	19.25674
31	12.59028	15.40647	17.91125	40.50829	1.09121	1.23641	7.74201	18.53029
32	12.22848	14.99154	17.43985	39.36224	1.05825	1.19907	7.50816	17.84636
33	11.88880	14.60269	16.99763	38.33284	1.02816	1.16497	7.29465	17.20439
34	11.56948	14.23852	16.58275	37.41260	1.00074	1.13390	7.10011	16.60310
35	11.26898	13.89773	16.19353	36.59485	0.97583	1.10567	6.92335	16.04222
36	10.98588	13.57907	15.82848	35.87378	0.95327	1.08011	6.76330	15.52045
37	10.71893	13.28141	15.48625	35.24440	0.93293	1.05707	6.61897	15.03759
38	10.46698	13.00366	15.16552	34.70233	0.91468	1.03639	6.48953	14.59212
39	10.22899	12.74470	14.86501	34.24380	0.89843	1.01797	6.37421	14.18305
40	10.00400	12.50350	14.58359	33.86581	0.88407	1.00171	6.27235	13.80911
41	9.79112	12.27901	14.32010	33.56578	0.87153	0.98750	6.18335	13.46878
42	9.58950	12.07013	14.07333	33.34163	0.86073	0.97526	6.10672	13.15991
43	9.39837	11.87576	13.84219	33.19194	0.85161	0.96493	6.04203	12.88061
44	9.21698	11.69473	13.62545	33.11568	0.84412	0.95644	5.98891	12.62807
45	9.04460	11.52574	13.42194	33.11241	0.83822	0.94976	5.94708	12.39967
46	8.88049	11.36731	13.23033	33.18195	0.83388	0.94485	5.91629	12.19211
47	8.72392	11.21786	13.04919	33.32497	0.83108	0.94167	5.89639	12.00132
48	8.57417	11.07555	12.87708	33.54227	0.82979	0.94021	5.88725	11.82327
49	8.57417	11.07555	12.87708	33.83537	0.83002	0.94046	5.88885	11.82327
50	8.57417	11.07555	12.87708	34.20619	0.83175	0.94243	5.90117	11.82327
51	8.57417	11.07555	12.87708	34.65726	0.83501	0.94612	5.92428	11.82327
52	8.57417	11.07555	12.87708	35.19157	0.83981	0.95156	5.95833	11.82327
53	8.57417	11.07555	12.87708	35.81282	0.84617	0.95877	6.00349	11.82327
54	8.57417	11.07555	12.87708	36.52536	0.85414	0.96780	6.06000	11.82327
55	8.57417	11.07555	12.87708	37.3409	0.86375	0.97869	6.12820	11.82327
56	9.81990	12.96423	15.22625	38.24478	0.87506	0.99150	6.20845	14.67065
57	11.06564	14.85290	17.57538	39.26395	0.88814	1.00632	6.30120	17.51804
58	12.31137	16.74156	19.92456	40.39903	0.90305	1.02321	6.40699	20.36540
59	13.55711	18.63022	22.27371	41.65858	0.91988	1.04228	6.52643	23.21277
60	14.80282	20.51889	24.62286	43.05191	0.93874	1.06365	6.66020	26.06015
61	16.04854	22.40756	26.97206	44.58987	0.95972	1.08743	6.80910	28.90752
62	17.29428	24.29623	29.32121	46.28448	0.98297	1.11376	6.97401	31.75490
63	18.53999	26.18488	31.67039	48.14931	1.00861	1.14281	7.15592	34.60229
64	19.78572	28.07358	34.01956	50.19963	1.03680	1.17476	7.35595	37.44968
65	21.03145	29.96225	36.36874	52.45233	1.06772	1.20980	7.57536	40.29706

Jefferson 1996 Time Period 3 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HLDGV	LDDV	LDDT	HDDV	MC
3	2.22005	2.38363	2.60856	4.22955	2.76132	3.11727	23.65694	0.81913
4	2.03696	2.18752	2.40337	4.27332	2.64502	2.98598	22.66058	0.78349
5	1.92633	2.06934	2.28047	4.31709	2.53722	2.86428	21.73701	0.75391
6	1.85205	1.99040	2.19886	4.36086	2.43727	2.75145	20.88072	0.72993
7	1.79864	1.93406	2.14096	4.40462	2.34459	2.64681	20.08667	0.71110
8	1.75834	1.89201	2.09795	4.44839	2.25863	2.54978	19.35028	0.69700
9	1.72683	1.85959	2.06493	4.49216	2.17892	2.45979	18.66737	0.68719
10	1.70153	1.83400	2.03893	4.53593	2.10501	2.37635	18.03415	0.68129
11	1.68077	1.81344	2.01808	4.57970	2.03649	2.29901	17.44716	0.67891
12	1.66346	1.79669	2.00111	4.62346	1.97301	2.22733	16.90327	0.67968
13	1.64881	1.78292	1.98713	4.66723	1.91422	2.16097	16.39961	0.68326
14	1.63629	1.77151	1.97551	4.71100	1.85982	2.09956	15.93357	0.68930
15	1.62547	1.76199	1.96577	4.75477	1.80953	2.04279	15.50276	0.69750
16	1.61605	1.75402	1.95756	4.79853	1.76311	1.99038	15.10504	0.70754
17	1.60779	1.74732	1.95060	4.84230	1.72031	1.94207	14.73843	0.71914
18	1.60051	1.74168	1.94468	4.88607	1.68095	1.89763	14.40115	0.73204
19	1.59406	1.73692	1.93961	4.92984	1.64481	1.85684	14.09158	0.74598
20	1.59530	1.73507	1.93797	4.97361	1.61175	1.81951	13.80827	0.76073
21	1.60462	1.74650	1.95095	5.01737	1.58159	1.78546	13.54989	0.77606
22	1.61316	1.75709	1.96293	5.06114	1.55420	1.75454	13.31522	0.79177
23	1.62101	1.76695	1.97402	5.10491	1.52945	1.72660	13.10323	0.80768
24	1.62828	1.77615	1.98431	5.14867	1.50724	1.70153	12.91292	0.82360
25	1.63502	1.78475	1.99390	5.19244	1.48746	1.67920	12.74346	0.83940
26	1.64130	1.79280	2.00286	5.23621	1.47002	1.65951	12.59410	0.85492
27	1.64718	1.80035	2.01125	5.27998	1.45486	1.64239	12.46417	0.87005
28	1.65270	1.80744	2.01911	5.32374	1.44189	1.62776	12.35311	0.88468
29	1.65789	1.81410	2.02651	5.36751	1.43108	1.61555	12.26045	0.89872
30	1.66280	1.82036	2.03347	5.41128	1.42236	1.60571	12.18576	0.91210
31	1.66744	1.82625	2.04005	5.45505	1.41571	1.59819	12.12874	0.92477
32	1.67185	1.83180	2.04627	5.49882	1.41108	1.59298	12.08915	0.93667
33	1.67606	1.83704	2.05217	5.54259	1.40847	1.59003	12.06681	0.94779
34	1.68008	1.84197	2.05778	5.58635	1.40787	1.58935	12.06161	0.95811
35	1.68394	1.84664	2.06312	5.63012	1.40926	1.59093	12.07357	0.96766
36	1.68764	1.85106	2.06824	5.67389	1.41266	1.59476	12.10269	0.97644
37	1.69123	1.85524	2.07315	5.71765	1.41809	1.60088	12.14914	0.98451
38	1.69469	1.85923	2.07789	5.76143	1.42555	1.60931	12.21309	0.99192
39	1.69806	1.86304	2.08248	5.80519	1.43509	1.62008	12.29481	0.99874
40	1.70135	1.86670	2.08695	5.84896	1.44675	1.63324	12.39469	1.00506
41	1.70458	1.87023	2.09133	5.89272	1.46057	1.64885	12.51312	1.01099
42	1.70775	1.87366	2.09564	5.93650	1.47662	1.66697	12.65064	1.01666
43	1.71089	1.87701	2.09992	5.98026	1.49497	1.68768	12.80786	1.02220
44	1.71401	1.88032	2.10419	6.02403	1.51570	1.71108	12.98543	1.02776
45	1.71712	1.88361	2.10849	6.06780	1.53890	1.73727	13.18418	1.03352
46	1.72023	1.88692	2.11284	6.11157	1.56467	1.76637	13.40501	1.03967
47	1.72337	1.89028	2.11728	6.15533	1.59314	1.79850	13.64889	1.04641
48	1.72655	1.89373	2.12184	6.19910	1.62443	1.83383	13.91696	1.05396
49	1.79015	1.96925	2.20871	6.24287	1.65869	1.87250	14.21047	1.08828
50	1.85376	2.04478	2.29559	6.28664	1.69608	1.91471	14.53077	1.12260
51	1.91736	2.12031	2.38246	6.33040	1.73677	1.96065	14.87940	1.15692
52	1.98096	2.19584	2.46933	6.37418	1.78097	2.01054	15.25807	1.19124
53	2.04456	2.27137	2.55620	6.41794	1.82889	2.06464	15.66859	1.22556
54	2.10816	2.34690	2.64308	6.46171	1.88076	2.12320	16.11301	1.25988
55	2.17177	2.42242	2.72995	6.50548	1.93686	2.18653	16.59363	1.29420
56	2.23537	2.49795	2.81682	6.54924	1.99746	2.25495	17.11281	1.32852
57	2.29897	2.57348	2.90369	6.59301	2.06289	2.32881	17.67336	1.36284
58	2.36257	2.64901	2.99057	6.63678	2.13349	2.40851	18.27815	1.39715
59	2.42617	2.72454	3.07744	6.68055	2.20964	2.49447	18.93054	1.43147
60	2.48977	2.80007	3.16431	6.72431	2.29175	2.58717	19.63409	1.46579
61	2.55338	2.87559	3.25119	6.76808	2.38031	2.68714	20.39268	1.50011
62	2.61698	2.95112	3.33806	6.81185	2.47579	2.79493	21.21071	1.53443
63	2.68058	3.02665	3.42493	6.85562	2.57876	2.91117	22.09290	1.56875
64	2.74418	3.10218	3.51181	6.89939	2.68983	3.03657	23.04448	1.60307
65	2.80778	3.17771	3.59868	6.94316	2.80968	3.17185	24.07120	1.63739

Jefferson 1996 Time Period 4 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	8.94759	10.12578	12.90969	15.92584	1.65438	2.28766	5.47575	15.45095
4	6.60825	7.54251	9.58456	13.09035	1.57068	2.17192	5.19870	13.03499
5	5.28394	6.05612	7.65408	11.35380	1.49252	2.06384	4.94001	11.24561
6	4.43414	5.09184	6.39442	10.10399	1.41950	1.96287	4.69834	9.89500
7	3.84366	4.41720	5.51064	9.12246	1.35125	1.86849	4.47241	8.85793
8	3.45939	3.97028	4.91841	8.40188	1.28740	1.78021	4.26110	8.04909
9	3.16154	3.62160	4.45814	7.77341	1.22766	1.69759	4.06335	7.40918
10	2.91944	3.33702	4.08529	7.21173	1.17171	1.62023	3.87819	6.89618
11	2.71791	3.09919	3.77640	6.70734	1.11930	1.54776	3.70472	6.47980
12	2.54682	2.89645	3.51555	6.25266	1.07018	1.47983	3.54212	6.13782
13	2.39913	2.72062	3.29155	5.84151	1.02412	1.41613	3.38965	5.85373
14	2.26980	2.56582	3.09633	5.46869	0.98090	1.35637	3.24660	5.61504
15	2.15513	2.42775	2.92395	5.12980	0.94033	1.30027	3.11232	5.41221
16	2.05234	2.30315	2.76992	4.82108	0.90223	1.24759	2.98622	5.23788
17	1.95930	2.18954	2.63083	4.53924	0.86643	1.19809	2.86775	5.08629
18	1.87437	2.08499	2.50400	4.28142	0.83279	1.15158	2.75640	4.95289
19	1.79625	1.98799	2.38738	4.04515	0.80116	1.10784	2.65172	4.83414
20	1.72165	1.90842	2.29158	3.83334	0.77141	1.06670	2.55325	4.72717
21	1.65639	1.84057	2.20722	3.64661	0.74342	1.02800	2.46060	4.62976
22	1.59666	1.77835	2.12999	3.47557	0.71708	0.99157	2.37341	4.54012
23	1.54173	1.72100	2.05890	3.31872	0.69228	0.95727	2.29132	4.45685
24	1.49098	1.66791	1.99317	3.17471	0.66892	0.92498	2.21402	4.37888
25	1.44393	1.61858	1.93215	3.04233	0.64692	0.89456	2.14120	4.30539
26	1.40015	1.57259	1.87529	2.92051	0.62620	0.86590	2.07261	4.23575
27	1.35927	1.52960	1.82217	2.80829	0.60667	0.83890	2.00798	4.16951
28	1.32100	1.48933	1.77241	2.70481	0.58827	0.81345	1.94707	4.10637
29	1.28508	1.45153	1.72570	2.60931	0.57093	0.78948	1.88968	4.04614
30	1.25128	1.41599	1.68180	2.52109	0.55459	0.76688	1.83559	3.98868
31	1.21941	1.38254	1.64048	2.43953	0.53919	0.74558	1.78462	3.93397
32	1.18929	1.35102	1.60155	2.36408	0.52468	0.72552	1.73660	3.88199
33	1.16078	1.32131	1.56485	2.29423	0.51101	0.70662	1.69135	3.83280
34	1.13374	1.29327	1.53024	2.22953	0.49813	0.68881	1.64873	3.78642
35	1.10806	1.26680	1.49758	2.16957	0.48601	0.67205	1.60861	3.74294
36	1.08362	1.24179	1.46677	2.11399	0.47460	0.65627	1.57084	3.70241
37	1.06034	1.21817	1.43768	2.06244	0.46386	0.64142	1.53531	3.66487
38	1.03814	1.19583	1.41022	2.01464	0.45377	0.62747	1.50190	3.63037
39	1.01692	1.17471	1.38429	1.97031	0.44428	0.61435	1.47051	3.59892
40	0.99663	1.15472	1.35981	1.92920	0.43538	0.60204	1.44104	3.57050
41	0.97720	1.13579	1.33668	1.89110	0.42704	0.59050	1.41341	3.54511
42	0.95857	1.11785	1.31481	1.85580	0.41922	0.57969	1.38753	3.52264
43	0.94068	1.10083	1.29412	1.82313	0.41190	0.56957	1.36333	3.50294
44	0.92347	1.08466	1.27453	1.79291	0.40507	0.56013	1.34072	3.48590
45	0.90691	1.06925	1.25593	1.76501	0.39871	0.55133	1.31965	3.47129
46	0.89094	1.05455	1.23823	1.73929	0.39279	0.54314	1.30006	3.45882
47	0.87552	1.04046	1.22134	1.71564	0.38729	0.53555	1.28188	3.44814
48	0.86085	1.02700	1.20521	1.69399	0.38222	0.52852	1.26507	3.43879
49	0.85898	1.02511	1.20272	1.67470	0.37754	0.52205	1.24958	3.43879
50	0.85722	1.02332	1.20037	1.65737	0.37324	0.51611	1.23537	3.43879
51	0.85556	1.02163	1.19815	1.64191	0.36932	0.51069	1.22239	3.43879
52	0.85398	1.02004	1.19605	1.62825	0.36576	0.50577	1.21061	3.43879
53	0.85249	1.01852	1.19406	1.61630	0.36256	0.50134	1.20001	3.43879
54	0.85107	1.01709	1.19218	1.60603	0.35970	0.49739	1.19054	3.43879
55	0.84973	1.01573	1.19039	1.59737	0.35718	0.49390	1.18219	3.43879
56	0.84805	1.01406	1.18872	1.58902	0.35498	0.49086	1.17493	3.43879
57	0.84643	1.01244	1.18710	1.58075	0.35311	0.48828	1.16874	3.43879
58	0.84486	1.01086	1.18552	1.57252	0.35156	0.48614	1.16361	3.43879
59	0.84334	1.00932	1.18400	1.56434	0.35003	0.48443	1.15952	3.43879
60	0.84186	1.00782	1.18252	1.55620	0.34852	0.48272	1.15544	3.43879
61	0.84042	1.00636	1.18106	1.54810	0.34704	0.48104	1.15136	3.43879
62	0.83900	1.00494	1.17964	1.54002	0.34559	0.47939	1.14731	3.43879
63	0.83761	1.00355	1.17825	1.53200	0.34416	0.47776	1.14328	3.43879
64	0.83624	1.00219	1.17688	1.52402	0.34276	0.47616	1.13928	3.43879
65	0.83490	1.00086	1.17554	1.51608	0.34138	0.47459	1.13530	3.43879

Jefferson 1996 Time Period 4 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	85.19107	99.75188	129.30003	173.08313	5.39228	6.10980	38.25746	156.29434
4	65.52075	76.79974	99.43474	158.13866	4.96959	5.63087	35.25856	124.64815
5	53.62738	62.76089	80.78848	144.80269	4.58839	5.19894	32.55399	101.80711
6	45.66499	53.30869	68.07985	132.88348	4.24413	4.80888	30.11156	84.95224
7	39.96745	46.53307	58.90984	122.21385	3.93287	4.45620	27.90314	72.26106
8	35.69363	41.45425	52.01665	112.64848	3.65106	4.13689	25.90379	62.52628
9	32.37244	37.51633	46.66978	104.06049	3.39563	3.84747	24.09151	54.93085
10	29.71938	34.38029	42.41666	96.33888	3.16381	3.58481	22.44684	48.90961
11	27.55247	31.82776	38.96217	89.38676	2.95320	3.34617	20.95255	44.06471
12	25.75000	29.71164	36.10622	83.11894	2.76162	3.12910	19.59334	40.11064
13	24.22745	27.92955	33.70851	77.46089	2.58718	2.93144	18.35571	36.83934
14	22.92432	26.40788	31.66814	72.34685	2.42817	2.75128	17.22757	34.09685
15	21.79622	25.09250	29.91074	67.71941	2.28309	2.58688	16.19820	31.76772
16	20.80983	23.94287	28.38058	63.52737	2.15058	2.43675	15.25812	29.76440
17	19.93973	22.92793	27.03511	59.72630	2.02946	2.29951	14.39876	28.01987
18	19.16609	22.02365	25.84138	56.27625	1.91864	2.17395	13.61255	26.48232
19	18.47334	21.21124	24.77362	53.14220	1.81718	2.05899	12.89270	25.11140
20	17.73428	20.48799	23.86809	50.29332	1.72422	1.95366	12.23318	23.87589
21	16.94913	19.65483	22.89330	47.70190	1.63900	1.85709	11.62853	22.75116
22	16.23428	18.89229	22.00406	45.34370	1.56083	1.76852	11.07390	21.71831
23	15.58051	18.19084	21.18860	43.19701	1.48909	1.68724	10.56495	20.76231
24	14.98013	17.54279	20.43736	41.24257	1.42324	1.61263	10.09774	19.87178
25	14.42675	16.94189	19.74255	39.46330	1.36278	1.54412	9.66877	19.03801
26	13.91501	16.38304	19.09770	37.84395	1.30726	1.48122	9.27490	18.25432
27	13.44037	15.86203	18.49757	36.37099	1.25630	1.42346	8.91327	17.51573
28	12.99897	15.37535	17.93770	35.03230	1.20951	1.37046	8.58135	16.81848
29	12.58752	14.92008	17.41443	33.81726	1.16659	1.32183	8.27684	16.16002
30	12.20316	14.49374	16.92464	32.71622	1.12724	1.27724	7.99768	15.53847
31	11.84342	14.09422	16.46568	31.72073	1.09121	1.23641	7.74201	14.95228
32	11.50615	13.71965	16.03526	30.82329	1.05825	1.19907	7.50816	14.40041
33	11.18944	13.36839	15.63141	30.01718	1.02816	1.16497	7.29465	13.88241
34	10.89162	13.03898	15.25236	29.29657	1.00074	1.13390	7.10011	13.39721
35	10.61119	12.73009	14.89653	28.65622	0.97583	1.10567	6.92335	12.94463
36	10.34683	12.44046	14.56250	28.09157	0.95327	1.08011	6.76330	12.52360
37	10.09733	12.16899	14.24899	27.59872	0.93293	1.05707	6.61897	12.13397
38	9.86162	11.91460	13.95478	27.17427	0.91468	1.03639	6.48953	11.77452
39	9.63869	11.67627	13.67869	26.81523	0.89843	1.01797	6.37421	11.44444
40	9.42766	11.45304	13.41967	26.51923	0.88407	1.00171	6.27235	11.14270
41	9.22770	11.24398	13.17666	26.28424	0.87153	0.98750	6.18335	10.86808
42	9.03803	11.04813	12.94858	26.10870	0.86073	0.97526	6.10672	10.61885
43	8.85794	10.86456	12.73446	25.99150	0.85161	0.96493	6.04203	10.39348
44	8.68676	10.69233	12.53320	25.93178	0.84412	0.95644	5.98891	10.18971
45	8.52384	10.53041	12.34381	25.92923	0.83822	0.94976	5.94708	10.00541
46	8.36853	10.37768	12.16510	25.98370	0.83388	0.94485	5.91629	9.83793
47	8.22023	10.23293	11.99588	26.09567	0.83108	0.94167	5.89639	9.68398
48	8.07831	10.09486	11.83494	26.26585	0.82979	0.94021	5.88725	9.54031
49	8.07831	10.09486	11.83494	26.49538	0.83002	0.94046	5.88885	9.54031
50	8.07831	10.09486	11.83494	26.78574	0.83175	0.94243	5.90117	9.54031
51	8.07831	10.09486	11.83494	27.13896	0.83501	0.94612	5.92428	9.54031
52	8.07831	10.09486	11.83494	27.55740	0.83981	0.95156	5.95833	9.54031
53	8.07831	10.09486	11.83494	28.04385	0.84617	0.95877	6.00349	9.54031
54	8.07831	10.09486	11.83494	28.60182	0.85414	0.96780	6.06000	9.54031
55	8.07831	10.09486	11.83494	29.23509	0.86375	0.97869	6.12820	9.54031
56	9.20616	11.74546	13.93077	29.94823	0.87506	0.99150	6.20845	11.83789
57	10.33400	13.39606	16.02657	30.74629	0.88814	1.00632	6.30120	14.13548
58	11.46185	15.04666	18.12241	31.63516	0.90305	1.02321	6.40699	16.43304
59	12.58969	16.69724	20.21820	32.62144	0.91988	1.04228	6.52643	18.73062
60	13.71754	18.34784	22.31400	33.71252	0.93874	1.06365	6.66020	21.02818
61	14.84537	19.99843	24.40985	34.91685	0.95972	1.08743	6.80910	23.32578
62	15.97321	21.64902	26.50565	36.24385	0.98297	1.11376	6.97401	25.62332
63	17.10104	23.29959	28.60150	37.70416	1.00861	1.14281	7.15592	27.92090
64	18.22888	24.95020	30.69733	39.30969	1.03680	1.17476	7.35595	30.21849
65	19.35670	26.60080	32.79315	41.07368	1.06772	1.20980	7.57536	32.51607

Jefferson 1996 Time Period 4 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	2.22376	2.39469	2.65459	4.36413	2.76132	3.11727	23.65694	0.90987
4	2.04266	2.19941	2.45009	4.40929	2.64502	2.98598	22.66058	0.87028
5	1.93298	2.08161	2.32762	4.45445	2.53722	2.86428	21.73701	0.83742
6	1.85916	2.00284	2.24634	4.49961	2.43727	2.75145	20.88072	0.81079
7	1.80594	1.94661	2.18874	4.54477	2.34459	2.64681	20.08667	0.78987
8	1.76568	1.90463	2.14603	4.58993	2.25863	2.54978	19.35028	0.77420
9	1.73414	1.87229	2.11332	4.63509	2.17892	2.45979	18.66737	0.76331
10	1.70876	1.84678	2.08768	4.68025	2.10501	2.37635	18.03415	0.75676
11	1.68789	1.82632	2.06719	4.72541	2.03649	2.29901	17.44716	0.75411
12	1.67046	1.80970	2.05061	4.77057	1.97301	2.22733	16.90327	0.75497
13	1.65569	1.79607	2.03704	4.81573	1.91422	2.16097	16.39961	0.75894
14	1.64305	1.78482	2.02585	4.86089	1.85982	2.09956	15.93357	0.76566
15	1.63212	1.77548	2.01656	4.90605	1.80953	2.04279	15.50276	0.77476
16	1.62260	1.76771	2.00880	4.95121	1.76311	1.99038	15.10504	0.78591
17	1.61425	1.76123	2.00231	4.99637	1.72031	1.94207	14.73843	0.79880
18	1.60690	1.75582	1.99687	5.04153	1.68095	1.89763	14.40115	0.81313
19	1.60039	1.75130	1.99228	5.08669	1.64481	1.85684	14.09158	0.82862
20	1.60147	1.74983	1.99131	5.13185	1.61175	1.81951	13.80827	0.84500
21	1.61053	1.76157	2.00490	5.17701	1.58159	1.78546	13.54989	0.86203
22	1.61884	1.77248	2.01747	5.22217	1.55420	1.75454	13.31522	0.87948
23	1.62650	1.78265	2.02913	5.26733	1.52945	1.72660	13.10323	0.89714
24	1.63360	1.79215	2.03999	5.31249	1.50724	1.70153	12.91292	0.91483
25	1.64021	1.80105	2.05013	5.35765	1.48746	1.67920	12.74346	0.93238
26	1.64638	1.80939	2.05962	5.40281	1.47002	1.65951	12.59410	0.94962
27	1.65217	1.81723	2.06852	5.44798	1.45486	1.64239	12.46417	0.96643
28	1.65762	1.82460	2.07688	5.49313	1.44189	1.62776	12.35311	0.98268
29	1.66277	1.83154	2.08476	5.53829	1.43108	1.61555	12.26045	0.99828
30	1.66765	1.83806	2.09219	5.58345	1.42236	1.60571	12.18576	1.01314
31	1.67230	1.84422	2.09923	5.62862	1.41571	1.59819	12.12874	1.02720
32	1.67673	1.85002	2.10589	5.67377	1.41108	1.59298	12.08915	1.04042
33	1.68097	1.85550	2.11222	5.71894	1.40847	1.59003	12.06681	1.05277
34	1.68505	1.86067	2.11826	5.76409	1.40787	1.58935	12.06161	1.06424
35	1.68898	1.86557	2.12402	5.80926	1.40926	1.59093	12.07357	1.07484
36	1.69279	1.87021	2.12955	5.85442	1.41266	1.59476	12.10269	1.08460
37	1.69648	1.87463	2.13488	5.89957	1.41809	1.60088	12.14914	1.09356
38	1.70009	1.87884	2.14003	5.94474	1.42555	1.60931	12.21309	1.10179
39	1.70362	1.88288	2.14504	5.98989	1.43509	1.62008	12.29481	1.10937
40	1.70709	1.88676	2.14995	6.03506	1.44675	1.63324	12.39469	1.11639
41	1.71052	1.89052	2.15477	6.08022	1.46057	1.64885	12.51312	1.12298
42	1.71392	1.89419	2.15954	6.12538	1.47662	1.66697	12.65064	1.12927
43	1.71731	1.89779	2.16431	6.17054	1.49497	1.68768	12.80786	1.13542
44	1.72071	1.90136	2.16909	6.21570	1.51570	1.71108	12.98543	1.14161
45	1.72412	1.90493	2.17394	6.26086	1.53890	1.73727	13.18418	1.14801
46	1.72758	1.90854	2.17888	6.30602	1.56467	1.76637	13.40501	1.15484
47	1.73108	1.91222	2.18395	6.35118	1.59314	1.79850	13.64889	1.16232
48	1.73466	1.91601	2.18919	6.39634	1.62443	1.83383	13.91696	1.17071
49	1.79895	1.99255	2.27923	6.44150	1.65869	1.87250	14.21047	1.20883
50	1.86324	2.06909	2.36927	6.48666	1.69608	1.91471	14.53077	1.24695
51	1.92752	2.14563	2.45932	6.53182	1.73677	1.96065	14.87940	1.28507
52	1.99181	2.22217	2.54936	6.57698	1.78097	2.01054	15.25807	1.32319
53	2.05610	2.29871	2.63940	6.62214	1.82889	2.06464	15.66859	1.36131
54	2.12038	2.37526	2.72944	6.66730	1.88076	2.12320	16.11301	1.39944
55	2.18467	2.45180	2.81948	6.71246	1.93686	2.18653	16.59363	1.43756
56	2.24896	2.52834	2.90952	6.75762	1.99746	2.25495	17.11281	1.47568
57	2.31325	2.60488	2.99957	6.80278	2.06289	2.32881	17.67336	1.51380
58	2.37754	2.68142	3.08961	6.84794	2.13349	2.40851	18.27815	1.55192
59	2.44182	2.75796	3.17965	6.89311	2.20964	2.49447	18.93054	1.59004
60	2.50611	2.83450	3.26969	6.93826	2.29175	2.58717	19.63409	1.62816
61	2.57040	2.91104	3.35973	6.98343	2.38031	2.68714	20.39268	1.66628
62	2.63468	2.98759	3.44977	7.02858	2.47579	2.79493	21.21071	1.70440
63	2.69897	3.06413	3.53981	7.07375	2.57876	2.91117	22.09290	1.74252
64	2.76326	3.14067	3.62986	7.11891	2.68983	3.03657	23.04448	1.78064
65	2.82754	3.21721	3.71990	7.16407	2.80968	3.17185	24.07120	1.81876

Jefferson 1999 Time Period 1 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	7.87343	8.73259	10.76556	12.13477	1.49247	1.94522	5.02410	14.81863
4	5.79200	6.46132	7.95253	9.98226	1.41696	1.84680	4.76991	12.51265
5	4.63054	5.17579	6.34560	8.65971	1.34645	1.75491	4.53256	10.80472
6	3.89269	4.35105	5.30840	7.70598	1.28058	1.66905	4.31082	9.51560
7	3.38364	3.77834	4.58577	6.95609	1.21901	1.58879	4.10353	8.52574
8	3.05803	3.40380	4.10696	6.40581	1.16141	1.51373	3.90965	7.75371
9	2.80628	3.11237	3.73543	5.92559	1.10751	1.44348	3.72820	7.14294
10	2.60168	2.87470	3.43429	5.49612	1.05704	1.37770	3.55831	6.65329
11	2.43139	2.67622	3.18455	5.11021	1.00976	1.31608	3.39915	6.25586
12	2.28682	2.50711	2.97338	4.76213	0.96545	1.25832	3.24997	5.92945
13	2.16203	2.36056	2.79180	4.44717	0.92389	1.20415	3.11007	5.65829
14	2.05277	2.23166	2.63338	4.16139	0.88490	1.15333	2.97882	5.43047
15	1.95592	2.11683	2.49336	3.90146	0.84830	1.10563	2.85561	5.23687
16	1.86913	2.01336	2.36819	3.66450	0.81393	1.06084	2.73991	5.07048
17	1.79061	1.91917	2.25513	3.44802	0.78164	1.01875	2.63122	4.92579
18	1.71897	1.83268	2.15208	3.24986	0.75129	0.97920	2.52906	4.79847
19	1.65311	1.75262	2.05737	3.06811	0.72276	0.94201	2.43300	4.68512
20	1.58529	1.68143	1.97363	2.90554	0.69592	0.90703	2.34266	4.58302
21	1.52323	1.61982	1.89917	2.76288	0.67067	0.87412	2.25766	4.49004
22	1.46649	1.56344	1.83112	2.63219	0.64690	0.84314	2.17765	4.40448
23	1.41436	1.51159	1.76861	2.51232	0.62453	0.81398	2.10233	4.32501
24	1.36627	1.46371	1.71095	2.40223	0.60346	0.78652	2.03140	4.25058
25	1.32175	1.41933	1.65755	2.30101	0.58361	0.76065	1.96460	4.18044
26	1.28037	1.37806	1.60793	2.20784	0.56491	0.73628	1.90166	4.11396
27	1.24181	1.33957	1.56168	2.12199	0.54730	0.71332	1.84236	4.05074
28	1.20575	1.30359	1.51846	2.04281	0.53070	0.69169	1.78648	3.99048
29	1.17195	1.26989	1.47798	1.96970	0.51505	0.67130	1.73382	3.93299
30	1.14018	1.23825	1.44000	1.90215	0.50031	0.65208	1.68420	3.87815
31	1.11026	1.20852	1.40431	1.83968	0.48642	0.63398	1.63743	3.82593
32	1.08203	1.18052	1.37071	1.78186	0.47333	0.61692	1.59336	3.77631
33	1.05532	1.15414	1.33906	1.72832	0.46100	0.60084	1.55185	3.72937
34	1.03002	1.12925	1.30921	1.67870	0.44938	0.58570	1.51275	3.68510
35	1.00600	1.10574	1.28103	1.63270	0.43844	0.57145	1.47593	3.64359
36	0.98317	1.08352	1.25441	1.59003	0.42815	0.55803	1.44127	3.60491
37	0.96144	1.06250	1.22924	1.55045	0.41846	0.54541	1.40867	3.56908
38	0.94071	1.04259	1.20544	1.51372	0.40936	0.53354	1.37802	3.53614
39	0.92091	1.02373	1.18290	1.47963	0.40080	0.52239	1.34922	3.50612
40	0.90199	1.00584	1.16154	1.44800	0.39277	0.51192	1.32219	3.47900
41	0.88386	0.98885	1.14130	1.41867	0.38524	0.50211	1.29684	3.45477
42	0.86648	0.97271	1.12208	1.39147	0.37819	0.49291	1.27309	3.43332
43	0.84980	0.95734	1.10382	1.36627	0.37159	0.48431	1.25088	3.41451
44	0.83377	0.94270	1.08646	1.34295	0.36543	0.47628	1.23014	3.39826
45	0.81833	0.92873	1.06991	1.32139	0.35969	0.46880	1.21081	3.38431
46	0.80345	0.91536	1.05410	1.30150	0.35435	0.46184	1.19283	3.37241
47	0.78908	0.90252	1.03897	1.28318	0.34939	0.45538	1.17615	3.36221
48	0.77539	0.89023	1.02448	1.26642	0.34481	0.44941	1.16073	3.35329
49	0.77351	0.88838	1.02223	1.25174	0.34059	0.44391	1.14651	3.35329
50	0.77174	0.88664	1.02010	1.23856	0.33671	0.43886	1.13347	3.35329
51	0.77007	0.88499	1.01810	1.22679	0.33318	0.43425	1.12157	3.35329
52	0.76849	0.88343	1.01620	1.21640	0.32997	0.43006	1.11076	3.35329
53	0.76700	0.88196	1.01441	1.20731	0.32708	0.42630	1.10103	3.35329
54	0.76558	0.88056	1.01271	1.19950	0.32450	0.42293	1.09235	3.35329
55	0.76423	0.87923	1.01110	1.19292	0.32222	0.41997	1.08468	3.35329
56	0.78841	0.90988	1.05103	1.18755	0.32024	0.41739	1.07802	3.46694
57	0.81265	0.94059	1.09105	1.18335	0.31855	0.41519	1.07234	3.58059
58	0.83695	0.97135	1.13113	1.18032	0.31716	0.41337	1.06764	3.69423
59	0.86130	1.00217	1.17128	1.17843	0.31604	0.41191	1.06388	3.80789
60	0.88571	1.03304	1.21149	1.17769	0.31521	0.41083	1.06108	3.92153
61	0.91016	1.06396	1.25177	1.17808	0.31465	0.41010	1.05921	4.03518
62	0.93466	1.09492	1.29209	1.17963	0.31438	0.40974	1.05828	4.14883
63	0.95921	1.12592	1.33247	1.18233	0.31438	0.40974	1.05828	4.26248
64	0.98379	1.15697	1.37290	1.18622	0.31465	0.41011	1.05922	4.37613
65	1.00841	1.18805	1.41337	1.19130	0.31521	0.41083	1.06108	4.48978

Jefferson 1999 Time Period 1 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HOGV	LDDV	LDDT	HDDV	MC
3	69.18605	78.35204	99.15799	120.59068	5.10315	5.57644	36.37282	156.08669
4	53.66756	60.80067	76.72337	110.17853	4.70313	5.13931	33.52165	124.48256
5	44.33109	50.15842	62.89188	100.88710	4.34236	4.74509	30.95029	101.67188
6	38.09868	43.02795	53.53281	92.58272	4.01657	4.38908	28.62819	84.83940
7	33.64540	37.92807	46.80432	85.14893	3.72199	4.06718	26.52856	72.16504
8	30.30643	34.10724	41.75288	78.48456	3.45530	3.77575	24.62772	62.44322
9	27.71107	31.14284	37.83350	72.50110	3.21356	3.51159	22.90471	54.85780
10	25.63655	28.77902	34.71191	67.12132	2.99418	3.27186	21.34103	48.84460
11	23.94077	26.85179	32.17181	62.27763	2.79485	3.05405	19.92036	44.00618
12	22.52887	25.25117	30.06723	57.91069	2.61355	2.85594	18.62811	40.05736
13	21.33507	23.90079	28.29637	53.96864	2.44846	2.67554	17.45146	36.79042
14	20.31241	22.74585	26.78615	50.40553	2.29797	2.51110	16.37889	34.05153
15	19.42638	21.74617	25.48282	47.18152	2.16067	2.36106	15.40024	31.72551
16	18.65111	20.87154	24.34610	44.26085	2.03527	2.22403	14.50646	29.72487
17	17.96686	20.09885	23.34525	41.61256	1.92064	2.09877	13.68943	27.98264
18	17.35823	19.41026	22.45639	39.20880	1.81577	1.98417	12.94196	26.44711
19	16.81311	18.79175	21.66090	37.02527	1.71975	1.87924	12.25756	25.07805
20	16.13661	18.13483	20.86913	35.04041	1.63177	1.78311	11.63054	23.84416
21	15.34011	17.32019	19.93729	33.23492	1.55112	1.69498	11.05567	22.72098
22	14.61524	16.57628	19.08820	31.59195	1.47714	1.61414	10.52837	21.68944
23	13.95263	15.89372	18.31079	30.09624	1.40925	1.53995	10.04449	20.73473
24	13.34453	15.26484	17.59595	28.73454	1.34693	1.47185	9.60030	19.84537
25	12.78440	14.68332	16.93611	27.49492	1.28971	1.40932	9.19246	19.01273
26	12.26676	14.14393	16.32503	26.36671	1.23717	1.35191	8.81799	18.23006
27	11.78696	13.64230	15.75746	25.34044	1.18894	1.29920	8.47418	17.49245
28	11.34104	13.17475	15.22894	24.40775	1.14466	1.25082	8.15861	16.79614
29	10.92558	12.73814	14.73576	23.56120	1.10404	1.20644	7.86910	16.13855
30	10.53761	12.32980	14.27469	22.79411	1.06681	1.16575	7.60369	15.51783
31	10.17460	11.94741	13.84298	22.10051	1.03270	1.12848	7.36061	14.93242
32	9.83427	11.58894	13.43822	21.47525	1.00151	1.09440	7.13829	14.38128
33	9.51466	11.25259	13.05832	20.91365	0.97303	1.06327	6.93530	13.86397
34	9.21402	10.93677	12.70141	20.41156	0.94708	1.03492	6.75033	13.37941
35	8.93080	10.64005	12.36584	19.96542	0.92350	1.00915	6.58228	12.92743
36	8.66360	10.36110	12.05011	19.57204	0.90216	0.98582	6.43012	12.50696
37	8.41120	10.09874	11.75289	19.22867	0.88290	0.96479	6.29290	12.11785
38	8.17246	9.85188	11.47294	18.93292	0.86564	0.94592	6.16983	11.75888
39	7.94638	9.61950	11.20910	18.68279	0.85025	0.92911	6.06020	11.42924
40	7.73204	9.40064	10.96031	18.47655	0.83667	0.91426	5.96335	11.12790
41	7.52860	9.19441	10.72560	18.31284	0.82480	0.90129	5.87874	10.85365
42	7.33529	8.99995	10.50396	18.19055	0.81457	0.89012	5.80589	10.60475
43	7.15139	8.81641	10.29452	18.10889	0.80595	0.88069	5.74438	10.37968
44	6.97626	8.64298	10.09636	18.06728	0.79886	0.87295	5.69388	10.17617
45	6.80927	8.47880	9.90864	18.06548	0.79328	0.86685	5.65411	9.99212
46	6.64981	8.32299	9.73043	18.10344	0.78917	0.86236	5.62484	9.82486
47	6.49733	8.17463	9.56081	18.18146	0.78652	0.85946	5.60591	9.67111
48	6.35127	8.03273	9.39889	18.30003	0.78530	0.85813	5.59723	9.52763
49	6.35127	8.03273	9.39889	18.45993	0.78551	0.85836	5.59875	9.52763
50	6.35127	8.03273	9.39889	18.66225	0.78716	0.86016	5.61046	9.52763
51	6.35127	8.03273	9.39889	18.90833	0.79024	0.86353	5.63243	9.52763
52	6.35127	8.03273	9.39889	19.19986	0.79478	0.86849	5.66480	9.52763
53	6.35127	8.03273	9.39889	19.53879	0.80080	0.87507	5.70774	9.52763
54	6.35127	8.03273	9.39889	19.92754	0.80834	0.88331	5.76147	9.52763
55	6.35127	8.03273	9.39889	20.36874	0.81744	0.89325	5.82630	9.52763
56	7.11335	9.13889	10.80881	20.86559	0.82814	0.90495	5.90260	11.82216
57	7.87544	10.24504	12.21872	21.42163	0.84052	0.91847	5.99079	14.11670
58	8.63753	11.35120	13.62865	22.04091	0.85463	0.93389	6.09137	16.41122
59	9.39961	12.45737	15.03857	22.72806	0.87056	0.95130	6.20492	18.70573
60	10.16170	13.56352	16.44847	23.48827	0.88840	0.97080	6.33210	21.00026
61	10.92379	14.66968	17.85837	24.32733	0.90826	0.99250	6.47367	23.29478
62	11.68587	15.77583	19.26828	25.25186	0.93026	1.01654	6.63045	25.58923
63	12.44796	16.88197	20.67818	26.26927	0.95453	1.04305	6.80340	27.88379
64	13.21005	17.98811	22.08809	27.38788	0.98121	1.07221	6.99358	30.17831
65	13.97214	19.09424	23.49800	28.61691	1.01047	1.10419	7.20217	32.47290

Jefferson 1999 Time Period 1 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	2.15752	2.23981	2.56552	3.95621	2.47250	2.67282	19.08861	0.91266
4	1.97642	2.05260	2.35814	3.99715	2.36837	2.56024	18.28467	0.87295
5	1.86729	1.93992	2.23392	4.03809	2.27184	2.45590	17.53944	0.83999
6	1.79421	1.86467	2.15137	4.07903	2.18235	2.35915	16.84851	0.81327
7	1.74179	1.81093	2.09272	4.11997	2.09936	2.26944	16.20779	0.79230
8	1.70231	1.77073	2.04905	4.16091	2.02239	2.18624	15.61361	0.77658
9	1.67150	1.73963	2.01541	4.20185	1.95102	2.10908	15.06258	0.76565
10	1.64679	1.71496	1.98882	4.24279	1.88484	2.03754	14.55163	0.75908
11	1.62652	1.69500	1.96738	4.28373	1.82349	1.97122	14.07799	0.75643
12	1.60962	1.67859	1.94981	4.32467	1.76664	1.90977	13.63913	0.75729
13	1.59531	1.66496	1.93522	4.36561	1.71400	1.85287	13.23272	0.76127
14	1.58305	1.65351	1.92299	4.40654	1.66529	1.80021	12.85667	0.76800
15	1.57244	1.64381	1.91263	4.44748	1.62027	1.75154	12.50905	0.77713
16	1.56318	1.63555	1.90379	4.48842	1.57870	1.70660	12.18814	0.78832
17	1.55504	1.62846	1.89620	4.52936	1.54038	1.66518	11.89232	0.80125
18	1.54783	1.62236	1.88965	4.57030	1.50513	1.62707	11.62017	0.81563
19	1.54141	1.61707	1.88395	4.61124	1.47278	1.59210	11.37039	0.83116
20	1.53333	1.61261	1.87935	4.65218	1.44317	1.56009	11.14178	0.84759
21	1.52524	1.62029	1.88875	4.69312	1.41616	1.53090	10.93330	0.86467
22	1.56095	1.62741	1.89743	4.73405	1.39164	1.50438	10.74395	0.88217
23	1.56866	1.63402	1.90546	4.77499	1.36948	1.48043	10.57289	0.89989
24	1.57577	1.64018	1.91291	4.81593	1.34959	1.45893	10.41933	0.91764
25	1.58234	1.64593	1.91986	4.85687	1.33188	1.43979	10.28259	0.93524
26	1.58844	1.65131	1.92634	4.89781	1.31627	1.42291	10.16208	0.95253
27	1.59412	1.65636	1.93241	4.93875	1.30269	1.40823	10.05724	0.96939
28	1.59943	1.66109	1.93810	4.97969	1.29108	1.39568	9.96763	0.98569
29	1.60441	1.66554	1.94346	5.02063	1.28140	1.38521	9.89286	1.00134
30	1.60909	1.66972	1.94849	5.06157	1.27359	1.37677	9.83259	1.01624
31	1.61350	1.67365	1.95325	5.10251	1.26763	1.37033	9.78658	1.03035
32	1.61767	1.67736	1.95775	5.14345	1.26349	1.36586	9.75464	1.04361
33	1.62163	1.68085	1.96202	5.18439	1.26116	1.36333	9.73661	1.05600
34	1.62539	1.68415	1.96607	5.22532	1.26062	1.36275	9.73242	1.06751
35	1.62897	1.68727	1.96994	5.26627	1.26187	1.36410	9.74206	1.07814
36	1.63240	1.69022	1.97364	5.30720	1.26491	1.36739	9.76557	1.08793
37	1.63569	1.69303	1.97719	5.34814	1.26976	1.37264	9.80305	1.09692
38	1.63884	1.69570	1.98061	5.38908	1.27645	1.37986	9.85464	1.10517
39	1.64189	1.69825	1.98393	5.43002	1.28499	1.38910	9.92059	1.11277
40	1.64484	1.70070	1.98716	5.47096	1.29543	1.40038	10.00118	1.11981
41	1.64770	1.70307	1.99032	5.51190	1.30781	1.41376	10.09674	1.12642
42	1.65048	1.70537	1.99344	5.55284	1.32218	1.42930	10.20770	1.13274
43	1.65320	1.70762	1.99654	5.59378	1.33861	1.44706	10.33456	1.13891
44	1.65587	1.70984	1.99962	5.63472	1.35717	1.46712	10.47784	1.14511
45	1.65850	1.71204	2.00273	5.67566	1.37794	1.48958	10.63821	1.15153
46	1.66110	1.71425	2.00588	5.71660	1.40102	1.51453	10.81639	1.15838
47	1.66368	1.71649	2.00909	5.75754	1.42651	1.54208	11.01318	1.16589
48	1.66626	1.71878	2.01239	5.79848	1.45453	1.57237	11.22948	1.17430
49	1.72269	1.78589	2.09248	5.83941	1.48520	1.60553	11.46631	1.21254
50	1.77913	1.85300	2.17256	5.88035	1.51868	1.64172	11.72476	1.25078
51	1.83557	1.92010	2.25265	5.92129	1.55511	1.68111	12.00607	1.28901
52	1.89201	1.98721	2.33274	5.96223	1.59469	1.72389	12.31161	1.32725
53	1.94845	2.05432	2.41282	6.00317	1.63760	1.77027	12.64286	1.36549
54	2.00489	2.12143	2.49291	6.04411	1.68405	1.82049	13.00146	1.40373
55	2.06133	2.18854	2.57300	6.08505	1.73428	1.87478	13.38927	1.44196
56	2.11776	2.25564	2.65308	6.12599	1.78854	1.93344	13.80820	1.48020
57	2.17420	2.32275	2.73317	6.16693	1.84712	1.99677	14.26050	1.51844
58	2.23064	2.38986	2.81325	6.20787	1.91034	2.06511	14.74851	1.55668
59	2.28708	2.45697	2.89334	6.24881	1.97852	2.13881	15.27493	1.59491
60	2.34352	2.52407	2.97343	6.28975	2.05205	2.21830	15.84261	1.63315
61	2.39996	2.59118	3.05351	6.33069	2.13134	2.30401	16.45471	1.67139
62	2.45640	2.65829	3.13360	6.37162	2.21684	2.39644	17.11478	1.70963
63	2.51283	2.72540	3.21369	6.41257	2.30904	2.49611	17.82661	1.74787
64	2.56927	2.79251	3.29377	6.45350	2.40849	2.60362	18.59444	1.78610
65	2.62571	2.85961	3.37386	6.49444	2.51580	2.71962	19.42288	1.82434

Jefferson 1999 Time Period 2 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	9.99027	10.31307	12.62240	16.26234	1.49247	1.94522	5.02410	16.71082
4	7.14981	7.42753	9.05106	12.78835	1.41696	1.84680	4.76991	14.42941
5	5.61174	5.84896	7.08915	10.81839	1.34645	1.75491	4.53256	12.73967
6	4.65565	4.86035	5.85696	9.49002	1.28058	1.66905	4.31082	11.46427
7	4.00685	4.18615	5.01543	8.49840	1.21901	1.58879	4.10353	10.48495
8	3.62290	3.76774	4.48845	7.83847	1.16141	1.51373	3.90965	9.72115
9	3.32652	3.44547	4.08342	7.27318	1.10751	1.44348	3.72820	9.11687
10	3.08309	3.18378	3.75603	6.77041	1.05704	1.37770	3.55831	8.63244
11	2.87819	2.96623	3.48531	6.32017	1.00976	1.31608	3.39915	8.23925
12	2.70219	2.78177	3.25711	5.91481	0.96545	1.25832	3.24997	7.91631
13	2.54840	2.62273	3.06155	5.54824	0.92389	1.20415	3.11007	7.64804
14	2.41204	2.48357	2.89154	5.21551	0.88490	1.15333	2.97882	7.42264
15	2.28962	2.36024	2.74185	4.91250	0.84830	1.10563	2.85561	7.23111
16	2.17849	2.24969	2.60856	4.63572	0.81393	1.06084	2.73991	7.06649
17	2.07665	2.14958	2.48867	4.38222	0.78164	1.01875	2.63122	6.92333
18	1.98253	2.05812	2.37986	4.14943	0.75129	0.97920	2.52906	6.79737
19	1.89490	1.97387	2.28030	3.93514	0.72276	0.94201	2.43300	6.68523
20	1.81143	1.89808	2.19163	3.74646	0.69592	0.90703	2.34266	6.58422
21	1.74253	1.83013	2.11049	3.58621	0.67067	0.87412	2.25766	6.49223
22	1.67939	1.76787	2.03631	3.43934	0.64690	0.84314	2.17765	6.40758
23	1.62125	1.71057	1.96818	3.30454	0.62453	0.81398	2.10233	6.32895
24	1.56749	1.65760	1.90533	3.18063	0.60346	0.78652	2.03140	6.25532
25	1.51758	1.60845	1.84711	3.06659	0.58361	0.76065	1.96460	6.18592
26	1.47108	1.56270	1.79300	2.96150	0.56491	0.73628	1.90166	6.12016
27	1.42762	1.51999	1.74257	2.86453	0.54730	0.71332	1.84236	6.05761
28	1.38688	1.48003	1.69543	2.77496	0.53070	0.69169	1.78648	5.99799
29	1.34859	1.44255	1.65127	2.69213	0.51505	0.67130	1.73382	5.94111
30	1.31250	1.40735	1.60982	2.61544	0.50031	0.65208	1.68420	5.88685
31	1.27842	1.37424	1.57085	2.54438	0.48642	0.63398	1.63743	5.83519
32	1.24617	1.34304	1.53416	2.47847	0.47333	0.61692	1.59336	5.78610
33	1.21557	1.31363	1.49957	2.41729	0.46100	0.60084	1.55185	5.73965
34	1.18651	1.28586	1.46692	2.36045	0.44938	0.58570	1.51275	5.69585
35	1.15884	1.25962	1.43607	2.30760	0.43844	0.57145	1.47593	5.65480
36	1.13246	1.23481	1.40690	2.25845	0.42815	0.55803	1.44127	5.61652
37	1.10727	1.21134	1.37929	2.21270	0.41846	0.54541	1.40867	5.58107
38	1.08318	1.18910	1.35315	2.17010	0.40936	0.53354	1.37802	5.54849
39	1.06011	1.16803	1.32836	2.13042	0.40080	0.52239	1.34922	5.51879
40	1.03798	1.14804	1.30485	2.09346	0.39277	0.51192	1.32219	5.49195
41	1.01673	1.12906	1.28252	2.05902	0.38524	0.50211	1.29684	5.46798
42	0.99630	1.11102	1.26130	2.02695	0.37819	0.49291	1.27309	5.44676
43	0.97662	1.09385	1.24110	1.99709	0.37159	0.48431	1.25088	5.42815
44	0.95764	1.07748	1.22186	1.96929	0.36543	0.47628	1.23014	5.41207
45	0.93932	1.06186	1.20349	1.94344	0.35969	0.46880	1.21081	5.39827
46	0.92160	1.04690	1.18593	1.91943	0.35435	0.46184	1.19283	5.38650
47	0.90445	1.03254	1.16910	1.89715	0.34939	0.45538	1.17615	5.37641
48	0.88811	1.01875	1.15290	1.87659	0.34481	0.44941	1.16073	5.36758
49	0.88479	1.01548	1.14886	1.85838	0.34059	0.44391	1.14651	5.36758
50	0.88167	1.01240	1.14504	1.84192	0.33671	0.43886	1.13347	5.36758
51	0.87872	1.00949	1.14145	1.82710	0.33318	0.43425	1.12157	5.36758
52	0.87594	1.00675	1.13806	1.81387	0.32997	0.43006	1.11076	5.36758
53	0.87331	1.00415	1.13485	1.80216	0.32708	0.42630	1.10103	5.36758
54	0.87081	1.00170	1.13181	1.79191	0.32450	0.42293	1.09235	5.36758
55	0.86845	0.99937	1.12894	1.78307	0.32222	0.41997	1.08468	5.36758
56	0.89245	1.03092	1.16889	1.77561	0.32024	0.41739	1.07802	5.48002
57	0.91656	1.06258	1.20898	1.76950	0.31855	0.41519	1.07234	5.59246
58	0.94078	1.09435	1.24920	1.76470	0.31716	0.41337	1.06764	5.70490
59	0.96509	1.12621	1.28954	1.76120	0.31604	0.41191	1.06388	5.81734
60	0.98950	1.15816	1.33000	1.75899	0.31521	0.41083	1.06108	5.92977
61	1.01399	1.19020	1.37056	1.75806	0.31465	0.41010	1.05921	6.04221
62	1.03857	1.22232	1.41122	1.75841	0.31438	0.40974	1.05828	6.15465
63	1.06322	1.25451	1.45197	1.76006	0.31438	0.40974	1.05828	6.26709
64	1.08794	1.28677	1.49281	1.76301	0.31465	0.41011	1.05922	6.37953
65	1.11273	1.31910	1.53373	1.76728	0.31521	0.41083	1.06108	6.49197

Jefferson 1999 Time Period 2 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	72.16289	83.71730	106.85434	145.58456	5.10315	5.57644	36.37282	189.69540
4	55.92287	64.93492	82.60660	133.01433	4.70313	5.13931	33.52165	151.28627
5	46.13997	53.49872	67.60085	121.79713	4.34236	4.74509	30.95029	123.56393
6	39.60559	45.82127	57.42674	111.77161	4.01657	4.38908	28.62819	103.10712
7	34.93582	40.32736	50.10597	102.79710	3.72199	4.06718	26.52856	87.70372
8	31.43497	36.21303	44.60915	94.75142	3.45530	3.77575	24.62772	75.88855
9	28.71460	33.02402	40.34557	87.52782	3.21356	3.51159	22.90471	66.66991
10	26.54103	30.48433	36.95186	81.03300	2.99418	3.27186	21.34103	59.36191
11	24.76498	28.41656	34.19235	75.18542	2.79485	3.05405	19.92036	53.48161
12	23.28690	26.70152	31.90779	69.91341	2.61355	2.85594	18.62811	48.68257
13	22.03757	25.25632	29.98694	65.15430	2.44846	2.67554	17.45146	44.71213
14	20.96761	24.02135	28.34996	60.85271	2.29797	2.51110	16.37889	41.38356
15	20.04076	22.95296	26.93803	56.96045	2.16067	2.36106	15.40024	38.55670
16	19.22977	22.01820	25.70715	53.43446	2.03527	2.22403	14.50646	36.12532
17	18.51387	21.19203	24.62373	50.23724	1.92064	2.09877	13.68943	34.00792
18	17.87691	20.45502	23.66165	47.33530	1.81577	1.98417	12.94196	32.14177
19	17.30614	19.79198	22.80063	44.69919	1.71975	1.87924	12.25756	30.47789
20	16.60677	19.10152	21.96237	42.30295	1.63177	1.78311	11.63054	28.97832
21	15.78996	18.25346	20.98575	40.12326	1.55112	1.69498	11.05567	27.61322
22	15.04622	17.47748	20.09550	38.13974	1.47714	1.61414	10.52837	26.35959
23	14.36598	16.76399	19.28000	36.33406	1.40925	1.53995	10.04449	25.19931
24	13.74133	16.10516	18.52972	34.69011	1.34693	1.47185	9.60030	24.11847
25	13.16561	15.49466	17.83679	33.19356	1.28971	1.40932	9.19246	23.10655
26	12.63327	14.92722	17.19467	31.83151	1.23717	1.35191	8.81799	22.15533
27	12.13960	14.39851	16.59795	30.59253	1.18894	1.29920	8.47418	21.25891
28	11.68057	13.90494	16.04204	29.46651	1.14466	1.25082	8.15861	20.41264
29	11.25275	13.44347	15.52309	28.44453	1.10404	1.20644	7.86910	19.61349
30	10.85316	13.01151	15.03779	27.51842	1.06681	1.16575	7.60369	18.85912
31	10.47921	12.60683	14.58332	26.68106	1.03270	1.12848	7.36061	18.14764
32	10.12864	12.22746	14.15722	25.92619	1.00151	1.09440	7.13829	17.47786
33	9.79945	11.87168	13.75735	25.24818	0.97303	1.06327	6.93530	16.84915
34	9.48989	11.53795	13.38179	24.64206	0.94708	1.03492	6.75033	16.26027
35	9.19838	11.22485	13.02886	24.10344	0.92350	1.00915	6.58228	15.71097
36	8.92352	10.93108	12.69701	23.62852	0.90216	0.98582	6.43012	15.19997
37	8.66404	10.65546	12.38488	23.21400	0.88290	0.96479	6.29290	14.72708
38	8.41881	10.39687	12.09118	22.85693	0.86564	0.94592	6.16983	14.29081
39	8.18680	10.15425	11.81470	22.55496	0.85025	0.92911	6.06020	13.89019
40	7.96704	9.92662	11.55435	22.30600	0.83667	0.91426	5.96335	13.52397
41	7.75869	9.71302	11.30908	22.10835	0.82480	0.90129	5.87874	13.19066
42	7.56094	9.51250	11.07784	21.96071	0.81457	0.89012	5.80589	12.88817
43	7.37304	9.32412	10.85968	21.86211	0.80595	0.88069	5.74438	12.61464
44	7.19430	9.14695	10.65361	21.81189	0.79886	0.87295	5.69388	12.36731
45	7.02405	8.97996	10.45870	21.80971	0.79328	0.86685	5.65411	12.14364
46	6.86162	8.82207	10.27393	21.85555	0.78917	0.86236	5.62484	11.94036
47	6.70640	8.67213	10.09828	21.94972	0.78652	0.85946	5.60591	11.75350
48	6.55774	8.52886	9.93071	22.09288	0.78530	0.85813	5.59723	11.57913
49	6.55774	8.52886	9.93071	22.28592	0.78551	0.85836	5.59875	11.57913
50	6.55774	8.52886	9.93071	22.53020	0.78716	0.86016	5.61046	11.57913
51	6.55774	8.52886	9.93071	22.82724	0.79024	0.86353	5.63243	11.57913
52	6.55774	8.52886	9.93071	23.17920	0.79478	0.86849	5.66480	11.57913
53	6.55774	8.52886	9.93071	23.58838	0.80080	0.87507	5.70774	11.57913
54	6.55774	8.52886	9.93071	24.05771	0.80834	0.88331	5.76147	11.57913
55	6.55774	8.52886	9.93071	24.59036	0.81744	0.89325	5.82630	11.57913
56	7.36868	9.75554	11.47021	25.19019	0.82814	0.90495	5.90260	14.36772
57	8.17962	10.98222	13.00970	25.86148	0.84052	0.91847	5.99079	17.15631
58	8.99057	12.20890	14.54921	26.60910	0.85463	0.93389	6.09137	19.94489
59	9.80151	13.43558	16.08870	27.43867	0.87056	0.95130	6.20492	22.73346
60	10.61245	14.66226	17.62817	28.35646	0.88840	0.97080	6.33210	25.52203
61	11.42340	15.88893	19.16765	29.36945	0.90826	0.99250	6.47367	28.31061
62	12.23434	17.11560	20.70714	30.48560	0.93026	1.01654	6.63045	31.09917
63	13.04528	18.34227	22.24661	31.71388	0.95453	1.04305	6.80340	33.88779
64	13.85623	19.56892	23.78610	33.06433	0.98121	1.07221	6.99358	36.67636
65	14.66717	20.79559	25.32561	34.54808	1.01047	1.10419	7.20217	39.46494

Jefferson 1999 Time Period 2 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	2.17468	2.24957	2.55577	3.90181	2.47250	2.67282	19.08861	0.82775
4	1.99118	2.06072	2.34667	3.94219	2.36837	2.56024	18.28467	0.79173
5	1.88071	1.94713	2.22139	3.98256	2.27184	2.45590	17.53944	0.76184
6	1.80682	1.87131	2.13810	4.02294	2.18235	2.35915	16.84851	0.73761
7	1.75387	1.81718	2.07888	4.06331	2.09936	2.26944	16.20779	0.71858
8	1.71405	1.77670	2.03473	4.10369	2.02239	2.18624	15.61361	0.70432
9	1.68301	1.74537	2.00067	4.14407	1.95102	2.10908	15.06258	0.69442
10	1.65813	1.72051	1.97369	4.18444	1.88484	2.03754	14.55163	0.68845
11	1.63774	1.70037	1.95187	4.22482	1.82349	1.97122	14.07799	0.68605
12	1.62076	1.68382	1.93394	4.26519	1.76664	1.90977	13.63913	0.68683
13	1.60639	1.67003	1.91900	4.30557	1.71400	1.85287	13.23272	0.69044
14	1.59408	1.65843	1.90642	4.34595	1.66529	1.80021	12.85667	0.69655
15	1.58344	1.64859	1.89572	4.38632	1.62027	1.75154	12.50905	0.70483
16	1.57415	1.64017	1.88654	4.42670	1.57870	1.70660	12.18814	0.71498
17	1.56598	1.63294	1.87861	4.46708	1.54038	1.66518	11.89232	0.72671
18	1.55876	1.62669	1.87172	4.50745	1.50513	1.62707	11.62017	0.73974
19	1.55232	1.62125	1.86570	4.54783	1.47278	1.59210	11.37039	0.75383
20	1.55433	1.61654	1.86064	4.58821	1.44317	1.56009	11.14178	0.76873
21	1.56374	1.62409	1.86971	4.62858	1.41616	1.53090	10.93330	0.78422
22	1.57233	1.63107	1.87804	4.66895	1.39164	1.50438	10.74395	0.80010
23	1.58020	1.63755	1.88575	4.70933	1.36948	1.48043	10.57289	0.81617
24	1.58743	1.64357	1.89289	4.74971	1.34959	1.45893	10.41933	0.83226
25	1.59413	1.64919	1.89952	4.79009	1.33188	1.43979	10.28259	0.84822
26	1.60033	1.65444	1.90571	4.83046	1.31627	1.42291	10.16208	0.86391
27	1.60611	1.65935	1.91149	4.87084	1.30269	1.40823	10.05724	0.87920
28	1.61149	1.66396	1.91691	4.91121	1.29108	1.39568	9.96763	0.89398
29	1.61654	1.66828	1.92198	4.95159	1.28140	1.38521	9.89286	0.90817
30	1.62127	1.67234	1.92676	4.99197	1.27359	1.37677	9.83259	0.92169
31	1.62572	1.67616	1.93126	5.03234	1.26763	1.37033	9.78658	0.93449
32	1.62992	1.67975	1.93551	5.07272	1.26349	1.36586	9.75464	0.94652
33	1.63390	1.68313	1.93954	5.11310	1.26116	1.36333	9.73661	0.95775
34	1.63767	1.68632	1.94336	5.15347	1.26062	1.36275	9.73242	0.96819
35	1.64125	1.68933	1.94699	5.19385	1.26187	1.36410	9.74206	0.97783
36	1.64467	1.69218	1.95046	5.23423	1.26491	1.36739	9.76557	0.98671
37	1.64793	1.69487	1.95378	5.27460	1.26976	1.37264	9.80305	0.99486
38	1.65106	1.69744	1.95697	5.31498	1.27645	1.37986	9.85464	1.00234
39	1.65406	1.69989	1.96005	5.35535	1.28499	1.38910	9.92059	1.00924
40	1.65695	1.70224	1.96305	5.39573	1.29543	1.40038	10.00118	1.01563
41	1.65975	1.70449	1.96596	5.43610	1.30781	1.41376	10.09674	1.02162
42	1.66246	1.70668	1.96882	5.47648	1.32218	1.42930	10.20770	1.02735
43	1.66510	1.70881	1.97165	5.51686	1.33861	1.44706	10.33456	1.03294
44	1.66767	1.71091	1.97445	5.55724	1.35717	1.46712	10.47784	1.03857
45	1.67019	1.71298	1.97725	5.59761	1.37794	1.48958	10.63821	1.04439
46	1.67266	1.71505	1.98007	5.63799	1.40102	1.51453	10.81639	1.05060
47	1.67511	1.71714	1.98294	5.67836	1.42651	1.54208	11.01318	1.05741
48	1.67753	1.71926	1.98585	5.71874	1.45453	1.57237	11.22948	1.06504
49	1.73414	1.78631	2.06460	5.75912	1.48520	1.60553	11.46631	1.09972
50	1.79076	1.85336	2.14335	5.79949	1.51868	1.64172	11.72476	1.13440
51	1.84738	1.92041	2.22209	5.83986	1.55511	1.68111	12.00607	1.16908
52	1.90399	1.98747	2.30084	5.88025	1.59469	1.72389	12.31161	1.20376
53	1.96061	2.05452	2.37959	5.92062	1.63760	1.77027	12.64286	1.23844
54	2.01723	2.12157	2.45834	5.96099	1.68405	1.82049	13.00146	1.27312
55	2.07384	2.18863	2.53709	6.00137	1.73428	1.87478	13.38927	1.30781
56	2.13046	2.25568	2.61583	6.04175	1.78854	1.93344	13.80820	1.34248
57	2.18708	2.32273	2.69458	6.08213	1.84712	1.99677	14.26050	1.37716
58	2.24370	2.38978	2.77333	6.12250	1.91034	2.06511	14.74851	1.41185
59	2.30031	2.45683	2.85208	6.16288	1.97852	2.13881	15.27493	1.44653
60	2.35693	2.52388	2.93082	6.20325	2.05205	2.21830	15.84261	1.48120
61	2.41355	2.59094	3.00957	6.24363	2.13134	2.30401	16.45471	1.51589
62	2.47016	2.65799	3.08832	6.28401	2.21684	2.39644	17.11478	1.55056
63	2.52678	2.72504	3.16707	6.32438	2.30904	2.49611	17.82661	1.58525
64	2.58340	2.79209	3.24581	6.36476	2.40849	2.60362	18.59444	1.61992
65	2.64001	2.85914	3.32456	6.40514	2.51580	2.71962	19.42288	1.65460

Jefferson 1999 Time Period 3 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	10.47620	10.66282	13.04739	17.14752	1.49247	1.94522	5.02410	16.93890
4	7.45721	7.63457	9.29759	13.36086	1.41696	1.84680	4.76991	14.65915
5	5.83096	5.98874	7.25242	11.23901	1.34645	1.75491	4.53256	12.97063
6	4.82396	4.96295	5.97466	9.82367	1.28058	1.66905	4.31082	11.69615
7	4.14265	4.26595	5.10545	8.77658	1.21901	1.58879	4.10353	10.71753
8	3.74531	3.83839	4.56770	8.09243	1.16141	1.51373	3.90965	9.95429
9	3.43865	3.50981	4.15527	7.50855	1.10751	1.44348	3.72820	9.35044
10	3.18621	3.24323	3.82211	6.98983	1.05704	1.37770	3.55831	8.86637
11	2.97322	3.02182	3.54680	6.52562	1.00976	1.31608	3.39915	8.47345
12	2.78983	2.83428	3.31489	6.10783	0.96545	1.25832	3.24997	8.15075
13	2.62919	2.67275	3.11630	5.73006	0.92389	1.20415	3.11007	7.88267
14	2.48640	2.53157	2.94380	5.38712	0.88490	1.15333	2.97882	7.65744
15	2.35787	2.40658	2.79203	5.07470	0.84830	1.10563	2.85561	7.46604
16	2.24092	2.29467	2.65703	4.78922	0.81393	1.06084	2.73991	7.30154
17	2.13347	2.19345	2.53570	4.52758	0.78164	1.01875	2.63122	7.15849
18	2.03393	2.10107	2.42570	4.28716	0.75129	0.97920	2.52906	7.03261
19	1.94104	2.01608	2.32514	4.06567	0.72276	0.94201	2.43300	6.92055
20	1.85385	1.93935	2.23536	3.87134	0.69592	0.90703	2.34266	6.81962
21	1.78347	1.86998	2.15262	3.70753	0.67067	0.87412	2.25766	6.72769
22	1.71895	1.80641	2.07699	3.55739	0.64690	0.84314	2.17765	6.64310
23	1.65951	1.74788	2.00751	3.41957	0.62453	0.81398	2.10233	6.56453
24	1.60452	1.69376	1.94340	3.29287	0.60346	0.78652	2.03140	6.49096
25	1.55345	1.64352	1.88401	3.17624	0.58361	0.76065	1.96460	6.42161
26	1.50586	1.59675	1.82881	3.06874	0.56491	0.73628	1.90166	6.35589
27	1.46135	1.55308	1.77734	2.96952	0.54730	0.71332	1.84236	6.29339
28	1.41961	1.51220	1.72924	2.87784	0.53070	0.69169	1.78648	6.23381
29	1.38035	1.47385	1.68416	2.79303	0.51505	0.67130	1.73382	6.17697
30	1.34334	1.43782	1.64184	2.71448	0.50031	0.65208	1.68420	6.12275
31	1.30838	1.40392	1.60205	2.64167	0.48642	0.63398	1.63743	6.07113
32	1.27526	1.37197	1.56457	2.57412	0.47333	0.61692	1.59336	6.02208
33	1.24384	1.34184	1.52922	2.51137	0.46100	0.60084	1.55185	5.97566
34	1.21397	1.31338	1.49585	2.45306	0.44938	0.58570	1.51275	5.93189
35	1.18553	1.28649	1.46432	2.39881	0.43844	0.57145	1.47593	5.89086
36	1.15840	1.26105	1.43448	2.34832	0.42815	0.55803	1.44127	5.85262
37	1.13247	1.23697	1.40624	2.30130	0.41846	0.54541	1.40867	5.81719
38	1.10767	1.21415	1.37948	2.25749	0.40936	0.53354	1.37802	5.78463
39	1.08390	1.19252	1.35410	2.21665	0.40080	0.52239	1.34922	5.75496
40	1.06109	1.17199	1.33001	2.17859	0.39277	0.51192	1.32219	5.72814
41	1.03917	1.15249	1.30713	2.14309	0.38524	0.50211	1.29684	5.70418
42	1.01809	1.13395	1.28536	2.11001	0.37819	0.49291	1.27309	5.68298
43	0.99777	1.11630	1.26464	2.07917	0.37159	0.48431	1.25088	5.66438
44	0.97817	1.09947	1.24489	2.05044	0.36543	0.47628	1.23014	5.64831
45	0.95923	1.08339	1.22603	2.02369	0.35969	0.46880	1.21081	5.63452
46	0.94091	1.06800	1.20798	1.99881	0.35435	0.46184	1.19283	5.62276
47	0.92316	1.05321	1.19067	1.97570	0.34939	0.45538	1.17615	5.61267
48	0.90625	1.03900	1.17402	1.95433	0.34481	0.44941	1.16073	5.60386
49	0.90260	1.03540	1.16955	1.93534	0.34059	0.44391	1.14651	5.60386
50	0.89916	1.03200	1.16534	1.91813	0.33671	0.43886	1.13347	5.60386
51	0.89591	1.02880	1.16137	1.90264	0.33318	0.43425	1.12157	5.60386
52	0.89285	1.02578	1.15763	1.88877	0.32997	0.43006	1.11076	5.60386
53	0.88995	1.02292	1.15409	1.87646	0.32708	0.42630	1.10103	5.60386
54	0.88720	1.02022	1.15074	1.86566	0.32450	0.42293	1.09235	5.60386
55	0.88461	1.01765	1.14756	1.85631	0.32222	0.41997	1.08468	5.60386
56	0.90849	1.04925	1.18743	1.84837	0.32024	0.41739	1.07802	5.71621
57	0.93250	1.08097	1.22745	1.84181	0.31855	0.41519	1.07234	5.82857
58	0.95662	1.11281	1.26761	1.83660	0.31716	0.41337	1.06764	5.94093
59	0.98086	1.14475	1.30791	1.83272	0.31604	0.41191	1.06388	6.05329
60	1.00519	1.17679	1.34833	1.83015	0.31521	0.41083	1.06108	6.16565
61	1.02962	1.20893	1.38887	1.82890	0.31465	0.41010	1.05921	6.27800
62	1.05414	1.24115	1.42952	1.82896	0.31438	0.40974	1.05828	6.39036
63	1.07874	1.27346	1.47027	1.83033	0.31438	0.40974	1.05828	6.50272
64	1.10342	1.30585	1.51112	1.83303	0.31465	0.41011	1.05922	6.61507
65	1.12818	1.33830	1.55205	1.83709	0.31521	0.41083	1.06108	6.72743

Jefferson 1999 Time Period 3 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	72.63017	84.57623	108.01855	148.97975	5.10315	5.57644	36.37282	194.40894
4	56.27689	65.59618	83.49467	136.11646	4.70313	5.13931	33.52165	155.04539
5	46.42393	54.03278	68.31134	124.63760	4.34236	4.74509	30.95029	126.63425
6	39.84218	46.26779	58.01440	114.37827	4.01657	4.38908	28.62819	105.66908
7	35.13846	40.71085	50.60452	105.19447	3.72199	4.06718	26.52856	89.88295
8	31.61221	36.54953	45.04068	96.96115	3.45530	3.77575	24.62772	77.77420
9	28.87224	33.32455	40.72530	89.56912	3.21356	3.51159	22.90471	68.32649
10	26.68311	30.75670	37.29059	82.92284	2.99418	3.27186	21.34103	60.83693
11	24.89449	28.66640	34.49797	76.93881	2.79485	3.05405	19.92036	54.81053
12	23.40599	26.93301	32.18623	71.54385	2.61355	2.85594	18.62811	49.89221
13	22.14795	25.47255	30.24269	66.67371	2.44846	2.67554	17.45146	45.82317
14	21.07056	24.22475	28.58650	62.27187	2.29797	2.51110	16.37889	42.41187
15	20.13728	23.14528	27.15811	58.28886	2.16067	2.36106	15.40024	39.51472
16	19.32069	22.20088	25.91295	54.68063	2.03527	2.22403	14.50646	37.02293
17	18.59982	21.36613	24.81699	51.40883	1.92064	2.09877	13.68943	34.85294
18	17.95842	20.62134	23.84380	48.43921	1.81577	1.98417	12.94196	32.94040
19	17.38364	19.95114	22.97281	45.74168	1.71975	1.87924	12.25756	31.23518
20	16.68068	19.25536	22.12766	43.28951	1.63177	1.78311	11.63054	29.69835
21	15.86068	18.40202	21.14441	41.05901	1.55112	1.69498	11.05567	28.29936
22	15.11399	17.62099	20.24808	39.02919	1.47714	1.61414	10.52837	27.01460
23	14.43099	16.90262	19.42694	37.18141	1.40925	1.53995	10.04449	25.82545
24	13.80374	16.23907	18.67143	35.49919	1.34693	1.47185	9.60030	24.71776
25	13.22558	15.62401	17.97362	33.96765	1.28971	1.40932	9.19246	23.68066
26	12.69094	15.05215	17.32692	32.57384	1.23717	1.35191	8.81799	22.70587
27	12.19509	14.51918	16.72591	31.30602	1.18894	1.29920	8.47418	21.78714
28	11.73402	14.02153	16.16597	30.15373	1.14466	1.25082	8.15861	20.91989
29	11.30427	13.55615	15.64324	29.10788	1.10404	1.20644	7.86910	20.10086
30	10.90285	13.12048	15.15438	28.16016	1.06681	1.16575	7.60369	19.32773
31	10.52719	12.71230	14.69656	27.30331	1.03270	1.12848	7.36061	18.59859
32	10.17502	12.32965	14.26733	26.53085	1.00151	1.09440	7.13829	17.91216
33	9.84433	11.97082	13.86452	25.83699	0.97303	1.06327	6.93530	17.27811
34	9.53338	11.63428	13.48622	25.21672	0.94708	1.03492	6.75033	16.66431
35	9.24057	11.31861	13.13073	24.66557	0.92350	1.00915	6.58228	16.10135
36	8.96451	11.02251	12.79651	24.17957	0.90216	0.98582	6.43012	15.57766
37	8.70393	10.74479	12.48219	23.75534	0.88290	0.96479	6.29290	15.09301
38	8.45768	10.48435	12.18646	23.38998	0.86564	0.94592	6.16983	14.64590
39	8.22473	10.24012	11.90810	23.08096	0.85025	0.92911	6.06020	14.23533
40	8.00413	10.01111	11.64604	22.82619	0.83667	0.91426	5.96335	13.86001
41	7.79500	9.79634	11.39919	22.62393	0.82480	0.90129	5.87874	13.51842
42	7.59656	9.59486	11.16651	22.47285	0.81457	0.89012	5.80589	13.20841
43	7.40803	9.40571	10.94705	22.37198	0.80595	0.88069	5.74438	12.92809
44	7.22872	9.22793	10.73978	22.32057	0.79886	0.87295	5.69388	12.67461
45	7.05795	9.06049	10.54379	22.31836	0.79328	0.86685	5.65411	12.44538
46	6.89506	8.90226	10.35802	22.36523	0.78917	0.86236	5.62484	12.23705
47	6.73940	8.75205	10.18144	22.46162	0.78652	0.85946	5.60591	12.04555
48	6.59033	8.60855	10.01301	22.60811	0.78530	0.85813	5.59723	11.86685
49	6.59033	8.60855	10.01301	22.80566	0.78551	0.85836	5.59875	11.86685
50	6.59033	8.60855	10.01301	23.05559	0.78716	0.86016	5.61046	11.86685
51	6.59033	8.60855	10.01301	23.35959	0.79024	0.86353	5.63243	11.86685
52	6.59033	8.60855	10.01301	23.71976	0.79478	0.86849	5.66480	11.86685
53	6.59033	8.60855	10.01301	24.13846	0.80080	0.87507	5.70774	11.86685
54	6.59033	8.60855	10.01301	24.61874	0.80834	0.88331	5.76147	11.86685
55	6.59033	8.60855	10.01301	25.16383	0.81744	0.89325	5.82630	11.86685
56	7.40897	9.85452	11.57242	25.77766	0.82814	0.90495	5.90260	14.72472
57	8.22761	11.10049	13.13183	26.46458	0.84052	0.91847	5.99079	17.58260
58	9.04625	12.34646	14.69124	27.22966	0.85463	0.93389	6.09137	20.44046
59	9.86489	13.59244	16.25064	28.07861	0.87056	0.95130	6.20492	23.29836
60	10.68353	14.83841	17.81001	29.01776	0.88840	0.97080	6.33210	26.15617
61	11.50218	16.08437	19.36940	30.05437	0.90826	0.99250	6.47367	29.01408
62	12.32082	17.33032	20.92880	31.19656	0.93026	1.01654	6.63045	31.87190
63	13.13946	18.57628	22.48819	32.45349	0.95453	1.04305	6.80340	34.72981
64	13.95811	19.82222	24.04759	33.83545	0.98121	1.07221	6.99358	37.58774
65	14.77674	21.06819	25.60701	35.35378	1.01047	1.10419	7.20217	40.44559

Jefferson 1999 Time Period 3 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	2.17670	2.25086	2.55527	3.89777	2.47250	2.67282	19.08861	0.81913
4	1.99294	2.06183	2.34597	3.93811	2.36837	2.56024	18.28467	0.78349
5	1.88232	1.94813	2.22056	3.97844	2.27184	2.45590	17.53944	0.75391
6	1.80834	1.87224	2.13719	4.01877	2.18235	2.35915	16.84851	0.72993
7	1.75534	1.81807	2.07790	4.05911	2.09936	2.26944	16.20779	0.71110
8	1.71548	1.77755	2.03370	4.09944	2.02239	2.18624	15.61361	0.69700
9	1.68440	1.74619	1.99959	4.13978	1.95102	2.10908	15.06258	0.68719
10	1.65950	1.72130	1.97257	4.18011	1.88484	2.03754	14.55163	0.68129
11	1.63911	1.70115	1.95072	4.22045	1.82349	1.97122	14.07799	0.67891
12	1.62210	1.68457	1.93274	4.26078	1.76664	1.90977	13.63913	0.67968
13	1.60773	1.67077	1.91777	4.30112	1.71400	1.85287	13.23272	0.68326
14	1.59542	1.65915	1.90515	4.34145	1.66529	1.80021	12.85667	0.68930
15	1.58477	1.64929	1.89441	4.38178	1.62027	1.75154	12.50905	0.69750
16	1.57548	1.64086	1.88520	4.42212	1.57870	1.70660	12.18814	0.70754
17	1.56730	1.63361	1.87723	4.46245	1.54038	1.66518	11.89232	0.71914
18	1.56007	1.62734	1.87031	4.50279	1.50513	1.62707	11.62017	0.73204
19	1.55363	1.62189	1.86426	4.54312	1.47278	1.59210	11.37039	0.74598
20	1.55566	1.61715	1.85915	4.58346	1.44317	1.56009	11.14178	0.76073
21	1.56508	1.62469	1.86818	4.62379	1.41616	1.53090	10.93330	0.77606
22	1.57368	1.63166	1.87649	4.66412	1.39164	1.50438	10.74395	0.79177
23	1.58157	1.63812	1.88417	4.70446	1.36948	1.48043	10.57289	0.80768
24	1.58882	1.64413	1.89128	4.74479	1.34959	1.45893	10.41933	0.82360
25	1.59553	1.64974	1.89788	4.78513	1.33188	1.43979	10.28259	0.83940
26	1.60174	1.65498	1.90404	4.82546	1.31627	1.42291	10.16208	0.85492
27	1.60752	1.65988	1.90980	4.86580	1.30269	1.40823	10.05724	0.87005
28	1.61292	1.66447	1.91518	4.90613	1.29108	1.39568	9.96763	0.88468
29	1.61797	1.66878	1.92024	4.94647	1.28140	1.38521	9.89286	0.89872
30	1.62271	1.67283	1.92499	4.98680	1.27359	1.37677	9.83259	0.91210
31	1.62717	1.67663	1.92947	5.02713	1.26763	1.37033	9.78658	0.92477
32	1.63137	1.68021	1.93370	5.06747	1.26349	1.36586	9.75464	0.93667
33	1.63535	1.68358	1.93770	5.10781	1.26116	1.36333	9.73661	0.94779
34	1.63912	1.68676	1.94149	5.14814	1.26062	1.36275	9.73242	0.95811
35	1.64270	1.68976	1.94511	5.18847	1.26187	1.36410	9.74206	0.96766
36	1.64612	1.69260	1.94855	5.22881	1.26491	1.36739	9.76557	0.97644
37	1.64938	1.69529	1.95185	5.26914	1.26976	1.37264	9.80305	0.98451
38	1.65251	1.69784	1.95502	5.30947	1.27645	1.37986	9.85464	0.99192
39	1.65551	1.70028	1.95808	5.34981	1.28499	1.38910	9.92059	0.99874
40	1.65839	1.70262	1.96105	5.39014	1.29543	1.40038	10.00118	1.00506
41	1.66119	1.70487	1.96395	5.43048	1.30781	1.41376	10.09674	1.01099
42	1.66389	1.70704	1.96678	5.47081	1.32218	1.42930	10.20770	1.01666
43	1.66652	1.70916	1.96958	5.51115	1.33861	1.44706	10.33456	1.02220
44	1.66908	1.71124	1.97236	5.55148	1.35717	1.46712	10.47784	1.02776
45	1.67159	1.71330	1.97513	5.59181	1.37794	1.48958	10.63821	1.03352
46	1.67405	1.71536	1.97792	5.63215	1.40102	1.51453	10.81639	1.03967
47	1.67649	1.71744	1.98075	5.67249	1.42651	1.54208	11.01318	1.04641
48	1.67889	1.71955	1.98363	5.71282	1.45453	1.57237	11.22948	1.05396
49	1.73553	1.78660	2.06226	5.75315	1.48520	1.60553	11.46631	1.08828
50	1.79218	1.85366	2.14090	5.79349	1.51868	1.64172	11.72476	1.12260
51	1.84882	1.92071	2.21953	5.83382	1.55511	1.68111	12.00607	1.15692
52	1.90547	1.98777	2.29816	5.87416	1.59469	1.72389	12.31161	1.19124
53	1.96211	2.05483	2.37679	5.91449	1.63760	1.77027	12.64286	1.22556
54	2.01876	2.12189	2.45543	5.95482	1.68405	1.82049	13.00146	1.25988
55	2.07540	2.18894	2.53406	5.99516	1.73428	1.87478	13.38927	1.29420
56	2.13204	2.25600	2.61269	6.03550	1.78854	1.93344	13.80820	1.32852
57	2.18869	2.32306	2.69132	6.07583	1.84712	1.99677	14.26050	1.36283
58	2.24533	2.39011	2.76996	6.11616	1.91034	2.06511	14.74851	1.39715
59	2.30198	2.45717	2.84859	6.15650	1.97852	2.13881	15.27493	1.43147
60	2.35862	2.52422	2.92722	6.19683	2.05205	2.21830	15.84261	1.46579
61	2.41526	2.59128	3.00585	6.23717	2.13134	2.30401	16.45471	1.50011
62	2.47191	2.65834	3.08449	6.27750	2.21684	2.39644	17.11478	1.53443
63	2.52855	2.72539	3.16312	6.31784	2.30904	2.49611	17.82661	1.56875
64	2.58520	2.79245	3.24175	6.35817	2.40849	2.60362	18.59444	1.60307
65	2.64184	2.85951	3.32038	6.39851	2.51580	2.71962	19.42288	1.63739

Jefferson 1999 Time Period 4 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	7.90266	8.76602	10.80094	12.20415	1.49247	1.94522	5.02410	14.87148
4	5.81147	6.48417	7.97582	10.03474	1.41696	1.84680	4.76991	12.56652
5	4.64511	5.19316	6.36285	8.70361	1.34645	1.75491	4.53256	10.85935
6	3.90437	4.36514	5.32214	7.74469	1.28058	1.66905	4.31082	9.57079
7	3.39345	3.79027	4.59725	6.99132	1.21901	1.58879	4.10353	8.58137
8	3.06705	3.41470	4.11744	6.43925	1.16141	1.51373	3.90965	7.80969
9	2.81470	3.12246	3.74514	5.95759	1.10751	1.44348	3.72820	7.19918
10	2.60958	2.88410	3.44334	5.52687	1.05704	1.37770	3.55831	6.70975
11	2.43883	2.68500	3.19300	5.13985	1.00976	1.31608	3.39915	6.31250
12	2.29386	2.51534	2.98129	4.79077	0.96545	1.25832	3.24997	5.98623
13	2.16870	2.36827	2.79922	4.47492	0.92389	1.20415	3.11007	5.71520
14	2.05909	2.23891	2.64033	4.18834	0.88490	1.15333	2.97882	5.48747
15	1.96191	2.12363	2.49988	3.92766	0.84830	1.10563	2.85561	5.29396
16	1.87481	2.01974	2.37430	3.69002	0.81393	1.06084	2.73991	5.12764
17	1.79600	1.92515	2.26085	3.47291	0.78164	1.01875	2.63122	4.98301
18	1.72409	1.83827	2.15742	3.27416	0.75129	0.97920	2.52906	4.85575
19	1.65797	1.75783	2.06235	3.09187	0.72276	0.94201	2.43300	4.74245
20	1.58994	1.68638	1.97836	2.92884	0.69592	0.90703	2.34266	4.64040
21	1.52777	1.62466	1.90380	2.78583	0.67067	0.87412	2.25766	4.54746
22	1.47093	1.56817	1.83564	2.65482	0.64690	0.84314	2.17765	4.46194
23	1.41871	1.51622	1.77305	2.53464	0.62453	0.81398	2.10233	4.38250
24	1.37053	1.46825	1.71531	2.42428	0.60346	0.78652	2.03140	4.30811
25	1.32593	1.42378	1.66183	2.32280	0.58361	0.76065	1.96460	4.23799
26	1.28447	1.38242	1.61213	2.22939	0.56491	0.73628	1.90166	4.17155
27	1.24582	1.34386	1.56581	2.14332	0.54730	0.71332	1.84236	4.10836
28	1.20969	1.30780	1.52252	2.06393	0.53070	0.69169	1.78648	4.04812
29	1.17582	1.27402	1.48198	1.99063	0.51505	0.67130	1.73382	3.99065
30	1.14398	1.24232	1.44394	1.92290	0.50031	0.65208	1.68420	3.93583
31	1.11400	1.21251	1.40819	1.86026	0.48642	0.63398	1.63743	3.88364
32	1.08569	1.18446	1.37454	1.80228	0.47333	0.61692	1.59336	3.83405
33	1.05892	1.15801	1.34284	1.74859	0.46100	0.60084	1.55185	3.78712
34	1.03356	1.13306	1.31294	1.69883	0.44938	0.58570	1.51275	3.74287
35	1.00949	1.10950	1.28471	1.65270	0.43844	0.57145	1.47593	3.70139
36	0.98660	1.08722	1.25804	1.60991	0.42815	0.55803	1.44127	3.66272
37	0.96480	1.06615	1.23283	1.57020	0.41846	0.54541	1.40867	3.62690
38	0.94402	1.04620	1.20898	1.53336	0.40936	0.53354	1.37802	3.59398
39	0.92417	1.02728	1.18639	1.49917	0.40080	0.52239	1.34922	3.56398
40	0.90519	1.00935	1.16500	1.46744	0.39277	0.51192	1.32219	3.53686
41	0.88701	0.99232	1.14471	1.43801	0.38524	0.50211	1.29684	3.51265
42	0.86959	0.97614	1.12546	1.41072	0.37819	0.49291	1.27309	3.49121
43	0.85285	0.96073	1.10716	1.38544	0.37159	0.48431	1.25088	3.47241
44	0.83677	0.94606	1.08976	1.36203	0.36543	0.47628	1.23014	3.45616
45	0.82128	0.93204	1.07317	1.34040	0.35969	0.46880	1.21081	3.44221
46	0.80636	0.91864	1.05733	1.32043	0.35435	0.46184	1.19283	3.43032
47	0.79194	0.90577	1.04217	1.30204	0.34939	0.45538	1.17615	3.42013
48	0.77820	0.89345	1.02764	1.28521	0.34481	0.44941	1.16073	3.41121
49	0.77631	0.89158	1.02536	1.27048	0.34059	0.44391	1.14651	3.41121
50	0.77452	0.88982	1.02321	1.25724	0.33671	0.43886	1.13347	3.41121
51	0.77283	0.88815	1.02118	1.24543	0.33318	0.43425	1.12157	3.41121
52	0.77123	0.88658	1.01927	1.23499	0.32997	0.43006	1.11076	3.41121
53	0.76972	0.88509	1.01746	1.22587	0.32708	0.42630	1.10103	3.41121
54	0.76829	0.88367	1.01574	1.21802	0.32450	0.42293	1.09235	3.41121
55	0.76693	0.88233	1.01411	1.21140	0.32222	0.41997	1.08468	3.41121
56	0.79111	0.91301	1.05406	1.20600	0.32024	0.41739	1.07802	3.52481
57	0.81536	0.94375	1.09408	1.20177	0.31855	0.41519	1.07234	3.63841
58	0.83967	0.97455	1.13418	1.19872	0.31716	0.41337	1.06764	3.75201
59	0.86403	1.00540	1.17435	1.19681	0.31604	0.41191	1.06388	3.86560
60	0.88844	1.03631	1.21458	1.19605	0.31521	0.41083	1.06108	3.97920
61	0.91291	1.06726	1.25486	1.19643	0.31465	0.41010	1.05921	4.09280
62	0.93742	1.09826	1.29521	1.19796	0.31438	0.40974	1.05828	4.20640
63	0.96197	1.12930	1.33560	1.20066	0.31438	0.40974	1.05828	4.32000
64	0.98656	1.16038	1.37605	1.20453	0.31465	0.41011	1.05922	4.43360
65	1.01119	1.19150	1.41654	1.20961	0.31521	0.41083	1.06108	4.54720

Jefferson 1999 Time Period 4 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	69.25053	78.46645	99.33272	121.25668	5.10315	5.57644	36.37282	156.88408
4	53.71642	60.88885	76.85718	110.78705	4.70313	5.13931	33.52165	125.11850
5	44.37029	50.22968	62.99904	101.44427	4.34236	4.74509	30.95029	102.19125
6	38.13132	43.08754	53.62140	93.09404	4.01657	4.38908	28.62819	85.27284
7	33.67336	37.97926	46.87941	85.61922	3.72199	4.06718	26.52856	72.53371
8	30.33087	34.15216	41.81781	78.91801	3.45530	3.77575	24.62772	62.76219
9	27.73280	31.18298	37.89058	72.90154	3.21356	3.51159	22.90471	55.13809
10	25.65614	28.81543	34.76280	67.49200	2.99418	3.27186	21.34103	49.09416
11	23.95862	26.88518	32.21771	62.62158	2.79485	3.05405	19.92036	44.23097
12	22.54529	25.28214	30.10905	58.23053	2.61355	2.85594	18.62811	40.26198
13	21.35030	23.92972	28.33479	54.26671	2.44846	2.67554	17.45146	36.97833
14	20.32660	22.77309	26.82169	50.68391	2.29797	2.51110	16.37889	34.22546
15	19.43970	21.77194	25.51590	47.44209	2.16067	2.36106	15.40024	31.88759
16	18.66365	20.89603	24.37704	44.50529	2.03527	2.22403	14.50646	29.87672
17	17.97871	20.12221	23.37433	41.84238	1.92064	2.09877	13.68943	28.12556
18	17.36948	19.43259	22.48381	39.42535	1.81577	1.98417	12.94196	26.58221
19	16.82379	18.81311	21.68684	37.22974	1.71975	1.87924	12.25756	25.20615
20	16.14680	18.15549	20.89400	35.23393	1.63177	1.78311	11.63054	23.96596
21	15.34986	17.34013	19.96114	33.41849	1.55112	1.69498	11.05567	22.83702
22	14.62458	16.59554	19.11110	31.76642	1.47714	1.61414	10.52837	21.80025
23	13.96159	15.91231	18.33281	30.26245	1.40925	1.53995	10.04449	20.84065
24	13.35313	15.28279	17.61716	28.89323	1.34693	1.47185	9.60030	19.94675
25	12.79266	14.70065	16.95656	27.64676	1.28971	1.40932	9.19246	19.10986
26	12.27470	14.16067	16.34474	26.51233	1.23717	1.35191	8.81799	18.32318
27	11.79461	13.65846	15.77652	25.48039	1.18894	1.29920	8.47418	17.58182
28	11.34840	13.19035	15.24736	24.54254	1.14466	1.25082	8.15861	16.88194
29	10.93267	12.75321	14.75358	23.69133	1.10404	1.20644	7.86910	16.22099
30	10.54445	12.34436	14.29195	22.92000	1.06681	1.16575	7.60369	15.59710
31	10.18120	11.96150	13.85971	22.22256	1.03270	1.12848	7.36061	15.00870
32	9.84065	11.60258	13.45446	21.59386	1.00151	1.09440	7.13829	14.45475
33	9.52083	11.26581	13.07410	21.02914	0.97303	1.06327	6.93530	13.93479
34	9.22000	10.94961	12.71676	20.52429	0.94708	1.03492	6.75033	13.44776
35	8.93660	10.65253	12.38079	20.07568	0.92350	1.00915	6.58228	12.99347
36	8.66924	10.37327	12.06469	19.68013	0.90216	0.98582	6.43012	12.57086
37	8.41668	10.11062	11.76713	19.33485	0.88290	0.96479	6.29290	12.17976
38	8.17780	9.86351	11.48686	19.03748	0.86564	0.94592	6.16983	11.81895
39	7.95159	9.63091	11.22273	18.78596	0.85025	0.92911	6.06020	11.48763
40	7.73713	9.41187	10.97368	18.57860	0.83667	0.91426	5.96335	11.18475
41	7.53358	9.20548	10.73872	18.41397	0.82480	0.90129	5.87874	10.90909
42	7.34018	9.01089	10.51686	18.29102	0.81457	0.89012	5.80589	10.65892
43	7.15620	8.82725	10.30723	18.20889	0.80595	0.88069	5.74438	10.43270
44	6.98099	8.65374	10.10889	18.16707	0.79886	0.87295	5.69388	10.22816
45	6.81392	8.48950	9.92100	18.16525	0.79328	0.86685	5.65411	10.04317
46	6.65440	8.33365	9.74264	18.20341	0.78917	0.86236	5.62484	9.87505
47	6.50186	8.18525	9.57289	18.28186	0.78652	0.85946	5.60591	9.72052
48	6.35574	8.04333	9.41084	18.40109	0.78530	0.85813	5.59723	9.57631
49	6.35574	8.04333	9.41084	18.56187	0.78551	0.85836	5.59875	9.57631
50	6.35574	8.04333	9.41084	18.76530	0.78716	0.86016	5.61046	9.57631
51	6.35574	8.04333	9.41084	19.01274	0.79024	0.86353	5.63243	9.57631
52	6.35574	8.04333	9.41084	19.30589	0.79478	0.86849	5.66480	9.57631
53	6.35574	8.04333	9.41084	19.64668	0.80080	0.87507	5.70774	9.57631
54	6.35574	8.04333	9.41084	20.03760	0.80834	0.88331	5.76147	9.57631
55	6.35574	8.04333	9.41084	20.48123	0.81744	0.89325	5.82630	9.57631
56	7.11889	9.15206	10.82368	20.98082	0.82814	0.90495	5.90260	11.88256
57	7.88203	10.26079	12.23653	21.53993	0.84052	0.91847	5.99079	14.18882
58	8.64518	11.36952	13.64937	22.16263	0.85463	0.93389	6.09137	16.49506
59	9.40832	12.47826	15.06222	22.85358	0.87056	0.95130	6.20492	18.80130
60	10.17147	13.58699	16.47504	23.61798	0.88840	0.97080	6.33210	21.10753
61	10.93462	14.69572	17.88786	24.46169	0.90826	0.99250	6.47367	23.41377
62	11.69776	15.80444	19.30069	25.39133	0.93026	1.01654	6.63045	25.71999
63	12.46091	16.91315	20.71352	26.41435	0.95453	1.04305	6.80340	28.02628
64	13.22406	18.02187	22.12636	27.53914	0.98121	1.07221	6.99358	30.33250
65	13.98720	19.13058	23.53918	28.77495	1.01047	1.10419	7.20217	32.63875

Jefferson 1999 Time Period 4 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	2.15834	2.24033	2.56535	3.95256	2.47250	2.67282	19.08861	0.90987
4	1.97714	2.05305	2.35790	3.99346	2.36837	2.56024	18.28467	0.87028
5	1.86796	1.94032	2.23363	4.03436	2.27184	2.45590	17.53944	0.83742
6	1.79484	1.86505	2.15105	4.07526	2.18235	2.35915	16.84851	0.81079
7	1.74239	1.81130	2.09238	4.11616	2.09936	2.26944	16.20779	0.78987
8	1.70290	1.77108	2.04869	4.15707	2.02239	2.18624	15.61361	0.77420
9	1.67208	1.73997	2.01503	4.19797	1.95102	2.10908	15.06258	0.76331
10	1.64736	1.71529	1.98843	4.23887	1.88484	2.03754	14.55163	0.75676
11	1.62709	1.69532	1.96697	4.27977	1.82349	1.97122	14.07799	0.75411
12	1.61018	1.67891	1.94939	4.32067	1.76664	1.90977	13.63913	0.75497
13	1.59586	1.66527	1.93479	4.36157	1.71400	1.85287	13.23272	0.75894
14	1.58360	1.65381	1.92254	4.40247	1.66529	1.80021	12.85667	0.76566
15	1.57299	1.64411	1.91217	4.44338	1.62027	1.75154	12.50905	0.77476
16	1.56373	1.63584	1.90332	4.48428	1.57870	1.70660	12.18814	0.78591
17	1.55558	1.62875	1.89571	4.52518	1.54038	1.66518	11.89232	0.79880
18	1.54838	1.62264	1.88915	4.56608	1.50513	1.62707	11.62017	0.81313
19	1.54195	1.61735	1.88344	4.60698	1.47278	1.59210	11.37039	0.82862
20	1.54388	1.61287	1.87882	4.64788	1.44317	1.56009	11.14178	0.84500
21	1.55310	1.62055	1.88822	4.68878	1.41616	1.53090	10.93330	0.86203
22	1.56151	1.62766	1.89688	4.72968	1.39164	1.50438	10.74395	0.87948
23	1.56923	1.63427	1.90489	4.77058	1.36948	1.48043	10.57289	0.89714
24	1.57634	1.64042	1.91234	4.81148	1.34959	1.45893	10.41933	0.91483
25	1.58292	1.64617	1.91927	4.85239	1.33188	1.43979	10.28259	0.93238
26	1.58902	1.65155	1.92575	4.89329	1.31627	1.42291	10.16208	0.94962
27	1.59471	1.65659	1.93181	4.93419	1.30269	1.40823	10.05724	0.96643
28	1.60002	1.66132	1.93749	4.97509	1.29108	1.39568	9.96763	0.98268
29	1.60500	1.66576	1.94283	5.01599	1.28140	1.38521	9.89286	0.99828
30	1.60968	1.66994	1.94786	5.05689	1.27359	1.37677	9.83259	1.01314
31	1.61410	1.67387	1.95261	5.09780	1.26763	1.37033	9.78658	1.02720
32	1.61828	1.67757	1.95710	5.13870	1.26349	1.36586	9.75464	1.04042
33	1.62223	1.68106	1.96136	5.17960	1.26116	1.36333	9.73661	1.05277
34	1.62599	1.68435	1.96540	5.22050	1.26062	1.36275	9.73242	1.06424
35	1.62958	1.68747	1.96926	5.26140	1.26187	1.36410	9.74206	1.07484
36	1.63300	1.69042	1.97295	5.30230	1.26491	1.36739	9.76557	1.08460
37	1.63629	1.69322	1.97649	5.34320	1.26976	1.37264	9.80305	1.09356
38	1.63945	1.69589	1.97991	5.38411	1.27645	1.37986	9.85464	1.10179
39	1.64249	1.69844	1.98322	5.42500	1.28499	1.38910	9.92059	1.10937
40	1.64544	1.70089	1.98644	5.46591	1.29543	1.40038	10.00118	1.11639
41	1.64829	1.70325	1.98960	5.50681	1.30781	1.41376	10.09674	1.12298
42	1.65107	1.70554	1.99271	5.54771	1.32218	1.42930	10.20770	1.12927
43	1.65379	1.70779	1.99579	5.58861	1.33861	1.44706	10.33456	1.13542
44	1.65646	1.71000	1.99887	5.62951	1.35717	1.46712	10.47784	1.14161
45	1.65909	1.71220	2.00196	5.67041	1.37794	1.48958	10.63821	1.14801
46	1.66168	1.71441	2.00510	5.71132	1.40102	1.51453	10.81639	1.15484
47	1.66426	1.71664	2.00830	5.75222	1.42651	1.54208	11.01318	1.16232
48	1.66683	1.71893	2.01159	5.79312	1.45453	1.57237	11.22948	1.17071
49	1.72328	1.78604	2.09163	5.83402	1.48520	1.60553	11.46631	1.20883
50	1.77973	1.85315	2.17167	5.87492	1.51868	1.64172	11.72476	1.24695
51	1.83618	1.92026	2.25172	5.91582	1.55511	1.68111	12.00607	1.28507
52	1.89263	1.98737	2.33176	5.95673	1.59469	1.72389	12.31161	1.32319
53	1.94908	2.05448	2.41181	5.99763	1.63760	1.77027	12.64286	1.36131
54	2.00553	2.12159	2.49185	6.03852	1.68405	1.82049	13.00146	1.39944
55	2.06198	2.18870	2.57189	6.07943	1.73428	1.87478	13.38927	1.43756
56	2.11843	2.25581	2.65194	6.12033	1.78854	1.93344	13.80820	1.47568
57	2.17488	2.32292	2.73198	6.16123	1.84712	1.99677	14.26050	1.51380
58	2.23133	2.39003	2.81202	6.20213	1.91034	2.06511	14.74851	1.55192
59	2.28778	2.45714	2.89207	6.24303	1.97852	2.13881	15.27493	1.59004
60	2.34423	2.52425	2.97211	6.28394	2.05205	2.21830	15.84261	1.62816
61	2.40068	2.59136	3.05216	6.32484	2.13134	2.30401	16.45471	1.66628
62	2.45713	2.65847	3.13220	6.36574	2.21684	2.39644	17.11478	1.70440
63	2.51358	2.72558	3.21224	6.40664	2.30904	2.49611	17.82661	1.74252
64	2.57003	2.79269	3.29229	6.44754	2.40849	2.60362	18.59444	1.78064
65	2.62648	2.85980	3.37233	6.48844	2.51580	2.71962	19.42288	1.81876

Jefferson 2006 Time Period 1 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	5.71158	6.54920	7.68410	8.57193	1.05678	1.46185	4.47957	11.94447
4	4.18791	4.80468	5.64167	7.07771	1.00331	1.38789	4.25292	10.05569
5	3.35095	3.83932	4.50966	6.15170	0.95339	1.31883	4.04130	8.65676
6	2.82515	3.22964	3.79392	5.47896	0.90675	1.25431	3.84359	7.60086
7	2.46535	2.81075	3.30175	4.94694	0.86315	1.19400	3.65877	6.79009
8	2.23512	2.53808	2.97930	4.55104	0.82236	1.13758	3.48590	6.15774
9	2.05800	2.32735	2.73021	4.20501	0.78420	1.08479	3.32412	5.65746
10	1.91495	2.15668	2.52879	3.89562	0.74846	1.03536	3.17264	5.25640
11	1.79667	2.01514	2.36205	3.61773	0.71499	0.98905	3.03074	4.93088
12	1.69698	1.89546	2.22131	3.36724	0.68361	0.94564	2.89772	4.66352
13	1.61158	1.79258	2.10057	3.14076	0.65418	0.90493	2.77299	4.44142
14	1.53741	1.70291	1.99555	2.93545	0.62657	0.86674	2.65596	4.25481
15	1.47223	1.62381	1.90311	2.74890	0.60066	0.83089	2.54611	4.09625
16	1.41434	1.55329	1.82088	2.57903	0.57632	0.79723	2.44295	3.95995
17	1.36247	1.48984	1.74706	2.42404	0.55346	0.76560	2.34603	3.84144
18	1.31560	1.43229	1.68026	2.28236	0.53197	0.73588	2.25494	3.73715
19	1.27296	1.37969	1.61936	2.15261	0.51176	0.70793	2.16930	3.64431
20	1.22148	1.32338	1.55338	2.03601	0.49276	0.68164	2.08875	3.56069
21	1.17024	1.27190	1.49218	1.93268	0.47488	0.65691	2.01296	3.48453
22	1.12355	1.22503	1.43648	1.83806	0.45805	0.63363	1.94163	3.41445
23	1.08080	1.18217	1.38556	1.75131	0.44221	0.61171	1.87447	3.34935
24	1.04152	1.14282	1.33881	1.67167	0.42729	0.59107	1.81123	3.28839
25	1.00527	1.10656	1.29575	1.59849	0.41324	0.57164	1.75167	3.23094
26	0.97172	1.07303	1.25593	1.53117	0.40000	0.55332	1.69555	3.17649
27	0.94056	1.04193	1.21902	1.46917	0.38753	0.53607	1.64268	3.12471
28	0.91154	1.01300	1.18468	1.41202	0.37577	0.51981	1.59285	3.07535
29	0.88443	0.98602	1.15266	1.35930	0.36470	0.50449	1.54590	3.02825
30	0.85904	0.96078	1.12272	1.31062	0.35426	0.49005	1.50165	2.98334
31	0.83521	0.93713	1.09467	1.26563	0.34442	0.47644	1.45996	2.94056
32	0.81280	0.91490	1.06832	1.22404	0.33515	0.46362	1.42067	2.89993
33	0.79166	0.89398	1.04353	1.18555	0.32642	0.45154	1.38365	2.86147
34	0.77170	0.87425	1.02014	1.14993	0.31819	0.44016	1.34879	2.82521
35	0.75280	0.85560	0.99805	1.11693	0.31045	0.42945	1.31596	2.79122
36	0.73488	0.83794	0.97715	1.08636	0.30316	0.41937	1.28506	2.75953
37	0.71787	0.82120	0.95733	1.05803	0.29630	0.40988	1.25599	2.73018
38	0.70168	0.80531	0.93852	1.03179	0.28986	0.40096	1.22866	2.70321
39	0.68626	0.79019	0.92063	1.00747	0.28380	0.39258	1.20299	2.67862
40	0.67155	0.77579	0.90360	0.98493	0.27811	0.38472	1.17888	2.65640
41	0.65750	0.76205	0.88736	0.96407	0.27278	0.37734	1.15628	2.63655
42	0.64405	0.74893	0.87186	0.94476	0.26778	0.37043	1.13511	2.61899
43	0.63117	0.73640	0.85705	0.92691	0.26311	0.36397	1.11530	2.60358
44	0.61882	0.72439	0.84287	0.91042	0.25875	0.35793	1.09681	2.59027
45	0.60696	0.71289	0.82929	0.89522	0.25468	0.35231	1.07957	2.57885
46	0.59557	0.70185	0.81627	0.88123	0.25090	0.34708	1.06354	2.56910
47	0.58460	0.69126	0.80377	0.86838	0.24739	0.34222	1.04868	2.56074
48	0.57409	0.68106	0.79174	0.85664	0.24415	0.33774	1.03492	2.55344
49	0.57260	0.67950	0.78996	0.84609	0.24116	0.33360	1.02225	2.55344
50	0.57121	0.67804	0.78829	0.83662	0.23842	0.32981	1.01062	2.55344
51	0.56989	0.67666	0.78672	0.82818	0.23591	0.32634	1.00001	2.55344
52	0.56864	0.67535	0.78523	0.82072	0.23364	0.32320	0.99037	2.55344
53	0.56747	0.67412	0.78383	0.81422	0.23159	0.32037	0.98170	2.55344
54	0.56635	0.67295	0.78250	0.80864	0.22977	0.31784	0.97395	2.55344
55	0.56530	0.67185	0.78124	0.80396	0.22815	0.31561	0.96712	2.55344
56	0.58116	0.68797	0.80061	0.80015	0.22675	0.31367	0.96118	2.64652
57	0.59707	0.70415	0.82003	0.79719	0.22556	0.31202	0.95612	2.73961
58	0.61303	0.72038	0.83952	0.79508	0.22457	0.31065	0.95192	2.83270
59	0.62903	0.73666	0.85906	0.79380	0.22378	0.30956	0.94858	2.92579
60	0.64507	0.75298	0.87864	0.79335	0.22319	0.30874	0.94608	3.01887
61	0.66116	0.76934	0.89828	0.79373	0.22280	0.30820	0.94441	3.11196
62	0.67727	0.78574	0.91795	0.79494	0.22260	0.30793	0.94358	3.20505
63	0.69343	0.80217	0.93767	0.79700	0.22260	0.30793	0.94358	3.29814
64	0.70961	0.81864	0.95743	0.79991	0.22280	0.30820	0.94441	3.39122
65	0.72583	0.83514	0.97722	0.80369	0.22319	0.30874	0.94608	3.48431

Jefferson 2006 Time Period 1 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	53.80721	57.45047	66.75302	67.90909	4.32887	4.82789	35.04108	144.30629
4	42.16066	45.23714	52.55194	62.04565	3.98955	4.44944	32.29430	115.08745
5	35.17273	37.90913	44.03131	56.81326	3.68352	4.10814	29.81708	93.99834
6	30.51411	33.02376	38.35089	52.13676	3.40716	3.79992	27.58000	78.43633
7	27.18652	29.53426	34.29344	47.95056	3.15727	3.52123	25.55727	66.71854
8	24.69083	26.91710	31.25035	44.19760	2.93104	3.26892	23.72601	57.73045
9	22.74974	24.88158	28.88353	40.82806	2.72598	3.04022	22.06607	50.71758
10	21.19690	23.25310	26.99005	37.79854	2.53988	2.83267	20.55966	45.15817
11	19.92635	21.92073	25.44084	35.07088	2.37080	2.64410	19.19101	40.68491
12	18.86760	20.81042	24.14984	32.61169	2.21701	2.47258	17.94608	37.03413
13	17.97171	19.87097	23.05748	30.39177	2.07697	2.31639	16.81250	34.01373
14	17.20381	19.06567	22.12112	28.38527	1.94932	2.17402	15.77921	31.48160
15	16.53830	18.36780	21.30963	26.56970	1.83284	2.04413	14.83638	29.33113
16	15.95599	17.75710	20.59958	24.92499	1.72647	1.92549	13.97533	27.48148
17	15.44217	17.21829	19.97307	23.43362	1.62923	1.81704	13.18821	25.87074
18	14.98545	16.73933	19.41618	22.07997	1.54027	1.71783	12.46811	24.45108
19	14.57679	16.31081	18.91789	20.85034	1.45882	1.62699	11.80877	23.18535
20	13.96957	15.70240	18.21260	19.73259	1.38419	1.54376	11.20471	22.04460
21	13.19320	14.89216	17.27521	18.71588	1.31578	1.46746	10.65088	21.00615
22	12.48741	14.15558	16.42303	17.79063	1.25302	1.39746	10.14289	20.05249
23	11.84299	13.48305	15.64498	16.94838	1.19543	1.33324	9.67672	19.16982
24	11.25228	12.86657	14.93175	16.18156	1.14257	1.27428	9.24879	18.34756
25	10.70882	12.29940	14.27557	15.48347	1.09403	1.22015	8.85589	17.57777
26	10.20717	11.77586	13.66987	14.84812	1.04946	1.17044	8.49513	16.85419
27	9.74267	11.29110	13.10904	14.27021	1.00854	1.12480	8.16391	16.17224
28	9.31135	10.84097	12.58827	13.74496	0.97099	1.08292	7.85989	15.52848
29	8.90978	10.42188	12.10341	13.26824	0.93653	1.04449	7.58099	14.92053
30	8.53498	10.03073	11.65088	12.83625	0.90495	1.00926	7.32529	14.34664
31	8.18437	9.66481	11.22754	12.44566	0.87602	0.97700	7.09111	13.80542
32	7.85566	9.32177	10.83066	12.09355	0.84956	0.94749	6.87693	13.29587
33	7.54688	8.99952	10.45783	11.77728	0.82540	0.92055	6.68138	12.81760
34	7.25626	8.69622	10.10694	11.49455	0.80339	0.89600	6.50318	12.36962
35	6.98224	8.41025	9.77609	11.24330	0.78338	0.87369	6.34128	11.95175
36	6.72345	8.14017	9.46363	11.02176	0.76527	0.85349	6.19469	11.56302
37	6.47865	7.88469	9.16806	10.82839	0.74894	0.83528	6.06250	11.20328
38	6.24673	7.64266	8.88804	10.66186	0.73430	0.81894	5.94394	10.87140
39	6.02671	7.41303	8.62238	10.52098	0.72125	0.80439	5.83832	10.56664
40	5.81769	7.19489	8.37000	10.40485	0.70972	0.79154	5.74501	10.28804
41	5.61886	6.98739	8.12994	10.31266	0.69965	0.78031	5.66350	10.03448
42	5.42950	6.78977	7.90131	10.24379	0.69098	0.77064	5.59332	9.80437
43	5.24895	6.60134	7.68331	10.19780	0.68366	0.76247	5.53406	9.59629
44	5.07661	6.42148	7.47522	10.17437	0.67765	0.75577	5.48541	9.40814
45	4.91192	6.24961	7.27638	10.17336	0.67292	0.75049	5.44710	9.23798
46	4.75440	6.08522	7.08619	10.19474	0.66944	0.74660	5.41889	9.08335
47	4.60358	5.92782	6.90408	10.23867	0.66718	0.74409	5.40066	8.94120
48	4.45904	5.77697	6.72957	10.30544	0.66615	0.74294	5.39230	8.80855
49	4.45904	5.77697	6.72957	10.39549	0.66633	0.74314	5.39376	8.80855
50	4.45904	5.77697	6.72957	10.50942	0.66772	0.74470	5.40504	8.80855
51	4.45904	5.77697	6.72957	10.64799	0.67034	0.74761	5.42621	8.80855
52	4.45904	5.77697	6.72957	10.81217	0.67419	0.75191	5.45740	8.80855
53	4.45904	5.77697	6.72957	11.00304	0.67930	0.75761	5.49876	8.80855
54	4.45904	5.77697	6.72957	11.22196	0.68570	0.76474	5.55052	8.80855
55	4.45904	5.77697	6.72957	11.47042	0.69341	0.77335	5.61298	8.80855
56	4.88782	6.29895	7.34020	11.75022	0.70249	0.78347	5.68649	10.92990
57	5.31660	6.82093	7.95082	12.06334	0.71299	0.79518	5.77144	13.05126
58	5.74539	7.34291	8.56145	12.41209	0.72496	0.80853	5.86834	15.17261
59	6.17417	7.86489	9.17209	12.79906	0.73847	0.82360	5.97774	17.29396
60	6.60295	8.38687	9.78272	13.22715	0.75361	0.84048	6.10026	19.41531
61	7.03174	8.90885	10.39335	13.69967	0.77046	0.85927	6.23664	21.53665
62	7.46052	9.43083	11.00397	14.22032	0.78912	0.88008	6.38769	23.65799
63	7.88931	9.95282	11.61461	14.79327	0.80970	0.90304	6.55430	25.77936
64	8.31809	10.47480	12.22524	15.42319	0.83233	0.92828	6.73752	27.90070
65	8.74687	10.99677	12.83587	16.11530	0.85716	0.95597	6.93848	30.02206

Jefferson 2006 Time Period 1 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	1.72296	1.90626	2.36413	3.35887	1.84824	2.09006	13.27374	0.91266
4	1.57483	1.74237	2.16088	3.39363	1.77039	2.00203	12.71468	0.87295
5	1.48596	1.64404	2.03893	3.42839	1.69824	1.92044	12.19648	0.83999
6	1.42671	1.57849	1.95763	3.46315	1.63134	1.84479	11.71602	0.81327
7	1.38439	1.53167	1.89956	3.49791	1.56930	1.77463	11.27048	0.79230
8	1.35265	1.49655	1.85601	3.53266	1.51177	1.70957	10.85730	0.77658
9	1.32796	1.46924	1.82213	3.56742	1.45842	1.64924	10.47412	0.76565
10	1.30821	1.44739	1.79504	3.60218	1.40895	1.59329	10.11882	0.75908
11	1.29205	1.42951	1.77287	3.63694	1.36309	1.54143	9.78947	0.75643
12	1.27858	1.41461	1.75439	3.67170	1.32059	1.49338	9.48430	0.75729
13	1.26719	1.40200	1.73875	3.70645	1.28124	1.44888	9.20169	0.76127
14	1.25743	1.39120	1.72535	3.74121	1.24483	1.40771	8.94019	0.76800
15	1.24896	1.38183	1.71374	3.77597	1.21118	1.36965	8.69847	0.77713
16	1.24155	1.37364	1.70358	3.81073	1.18010	1.33451	8.47531	0.78832
17	1.23502	1.36641	1.69461	3.84549	1.15146	1.30212	8.26961	0.80125
18	1.22921	1.35998	1.68664	3.88024	1.12511	1.27232	8.08037	0.81563
19	1.22401	1.35423	1.67951	3.91500	1.10093	1.24497	7.90667	0.83116
20	1.22671	1.34610	1.66943	3.94976	1.07879	1.21994	7.74770	0.84759
21	1.23459	1.34844	1.67234	3.98452	1.05861	1.19711	7.60273	0.86467
22	1.24175	1.35057	1.67498	4.01927	1.04027	1.17638	7.47106	0.88217
23	1.24829	1.35251	1.67740	4.05403	1.02371	1.15765	7.35211	0.89989
24	1.25429	1.35430	1.67961	4.08879	1.00884	1.14084	7.24533	0.91764
25	1.25981	1.35594	1.68164	4.12355	0.99560	1.12587	7.15025	0.93524
26	1.26490	1.35745	1.68352	4.15830	0.98393	1.11267	7.06645	0.95253
27	1.26962	1.35885	1.68526	4.19306	0.97378	1.10119	6.99354	0.96939
28	1.27399	1.36015	1.68687	4.22782	0.96511	1.09138	6.93123	0.98569
29	1.27807	1.36136	1.68838	4.26258	0.95787	1.08319	6.87924	1.00134
30	1.28188	1.36249	1.68978	4.29733	0.95203	1.07659	6.83733	1.01624
31	1.28544	1.36355	1.69109	4.33210	0.94758	1.07156	6.80534	1.03035
32	1.28877	1.36454	1.69232	4.36685	0.94448	1.06806	6.78312	1.04361
33	1.29191	1.36547	1.69348	4.40161	0.94274	1.06608	6.77058	1.05600
34	1.29486	1.36635	1.69457	4.43637	0.94233	1.06563	6.76767	1.06751
35	1.29764	1.36718	1.69559	4.47113	0.94327	1.06668	6.77438	1.07814
36	1.30027	1.36796	1.69656	4.50589	0.94554	1.06926	6.79072	1.08793
37	1.30275	1.36870	1.69748	4.54064	0.94917	1.07336	6.81678	1.09692
38	1.30510	1.36940	1.69835	4.57540	0.95417	1.07901	6.85266	1.10517
39	1.30734	1.37006	1.69917	4.61016	0.96055	1.08623	6.89852	1.11277
40	1.30946	1.37069	1.69996	4.64492	0.96835	1.09505	6.95456	1.11981
41	1.31148	1.37129	1.70070	4.67967	0.97761	1.10552	7.02100	1.12642
42	1.31340	1.37186	1.70141	4.71443	0.98835	1.11767	7.09817	1.13274
43	1.31524	1.37241	1.70209	4.74919	1.00063	1.13155	7.18638	1.13891
44	1.31698	1.37293	1.70273	4.78395	1.01451	1.14725	7.28601	1.14511
45	1.31866	1.37342	1.70335	4.81870	1.03003	1.16480	7.39753	1.15153
46	1.32026	1.37390	1.70394	4.85347	1.04729	1.18431	7.52144	1.15838
47	1.32178	1.37435	1.70450	4.88822	1.06634	1.20586	7.65828	1.16589
48	1.32325	1.37479	1.70504	4.92298	1.08728	1.22954	7.80869	1.17430
49	1.32637	1.42640	1.76906	4.95774	1.11021	1.25547	7.97337	1.21254
50	1.40148	1.47802	1.83308	4.99250	1.13524	1.28377	8.15309	1.25078
51	1.44059	1.52964	1.89709	5.02725	1.16248	1.31457	8.34870	1.28901
52	1.47971	1.58125	1.96111	5.06201	1.19206	1.34803	8.56118	1.32725
53	1.51882	1.63287	2.02512	5.09677	1.22413	1.38430	8.79151	1.36549
54	1.55794	1.68449	2.08914	5.13153	1.25885	1.42356	9.04088	1.40373
55	1.59705	1.73610	2.15316	5.16628	1.29640	1.46602	9.31055	1.44197
56	1.63617	1.78772	2.21718	5.20104	1.33697	1.51189	9.60186	1.48020
57	1.67528	1.83934	2.28119	5.23580	1.38076	1.56142	9.91638	1.51844
58	1.71439	1.89095	2.34521	5.27056	1.42801	1.61485	10.25573	1.55668
59	1.75351	1.94257	2.40923	5.30532	1.47898	1.67249	10.62179	1.59492
60	1.79262	1.99418	2.47324	5.34007	1.53394	1.73464	11.01654	1.63315
61	1.83174	2.04580	2.53726	5.37483	1.59321	1.80167	11.44218	1.67139
62	1.87085	2.09742	2.60128	5.40959	1.65712	1.87394	11.90117	1.70963
63	1.90996	2.14903	2.66529	5.44435	1.72604	1.95188	12.39617	1.74787
64	1.94908	2.20065	2.72931	5.47910	1.80039	2.03595	12.93010	1.78611
65	1.98819	2.25226	2.79332	5.51386	1.88060	2.12666	13.50618	1.82434

Jefferson 2006 Time Period 2 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	6.94502	7.57343	8.88005	10.85078	1.05678	1.46185	4.47957	13.26493
4	4.94205	5.39269	6.32448	8.56733	1.00331	1.38789	4.25292	11.39740
5	3.87479	4.22614	4.95571	7.26263	0.95339	1.31883	4.04130	10.01423
6	3.21934	3.50756	4.11175	6.37613	0.90675	1.25431	3.84359	8.97021
7	2.77862	3.02324	3.54252	5.70993	0.86315	1.19400	3.65877	8.16856
8	2.51694	2.72639	3.19147	5.25866	0.82236	1.13758	3.48590	7.54334
9	2.31648	2.49915	2.92281	4.87118	0.78420	1.08479	3.32412	7.04869
10	2.15345	2.31554	2.70601	4.52663	0.74846	1.03536	3.17264	6.65215
11	2.01764	2.16364	2.52691	4.21824	0.71499	0.98905	3.03074	6.33029
12	1.90225	2.03553	2.37609	3.94081	0.68361	0.94564	2.89772	6.06594
13	1.80256	1.92572	2.24703	3.69018	0.65418	0.90493	2.77299	5.84634
14	1.71521	1.83030	2.13506	3.46297	0.62657	0.86674	2.65596	5.66183
15	1.63773	1.74638	2.03677	3.25634	0.60066	0.83089	2.54611	5.50505
16	1.56827	1.67180	1.94958	3.06790	0.57632	0.79723	2.44295	5.37029
17	1.50542	1.60491	1.87154	2.89560	0.55346	0.76560	2.34603	5.25311
18	1.44808	1.54445	1.80114	2.73769	0.53197	0.73588	2.25494	5.15000
19	1.39536	1.48939	1.73715	2.59262	0.51176	0.70793	2.16930	5.05820
20	1.33647	1.43039	1.66791	2.46401	0.49276	0.68164	2.08875	4.97552
21	1.28158	1.37563	1.60291	2.35314	0.47488	0.65691	2.01296	4.90022
22	1.23149	1.32577	1.54372	2.25158	0.45805	0.63363	1.94163	4.83092
23	1.18559	1.28015	1.48960	2.15841	0.44221	0.61171	1.87447	4.76656
24	1.14333	1.23826	1.43990	2.07282	0.42729	0.59107	1.81123	4.70629
25	1.10430	1.19965	1.39410	1.99410	0.41324	0.57164	1.75167	4.64948
26	1.06812	1.16392	1.35174	1.92160	0.40000	0.55332	1.69555	4.59565
27	1.03446	1.13078	1.31245	1.85476	0.38753	0.53607	1.64268	4.54445
28	1.00306	1.09993	1.27590	1.79306	0.37577	0.51981	1.59285	4.49564
29	0.97369	1.07115	1.24180	1.73605	0.36470	0.50449	1.54590	4.44908
30	0.94614	1.04421	1.20990	1.68333	0.35426	0.49005	1.50165	4.40467
31	0.92024	1.01896	1.18000	1.63452	0.34442	0.47644	1.45996	4.36238
32	0.89583	0.99522	1.15191	1.58930	0.33515	0.46362	1.42067	4.32220
33	0.87278	0.97286	1.12546	1.54737	0.32642	0.45154	1.38365	4.28418
34	0.85096	0.95177	1.10051	1.50846	0.31819	0.44016	1.34879	4.24833
35	0.83028	0.93182	1.07692	1.47233	0.31045	0.42945	1.31596	4.21472
36	0.81063	0.91292	1.05460	1.43878	0.30316	0.41937	1.28506	4.18339
37	0.79194	0.89500	1.03342	1.40760	0.29630	0.40988	1.25599	4.15437
38	0.77412	0.87797	1.01331	1.37861	0.28986	0.40096	1.22866	4.12769
39	0.75711	0.86176	0.99418	1.35165	0.28380	0.39258	1.20299	4.10338
40	0.74085	0.84632	0.97595	1.32659	0.27811	0.38472	1.17888	4.08142
41	0.72528	0.83158	0.95857	1.30329	0.27278	0.37734	1.15628	4.06179
42	0.71036	0.81749	0.94197	1.28163	0.26778	0.37043	1.13511	4.04442
43	0.69604	0.80402	0.92609	1.26151	0.26311	0.36397	1.11530	4.02919
44	0.68228	0.79112	0.91089	1.24284	0.25875	0.35793	1.09681	4.01603
45	0.66904	0.77874	0.89632	1.22551	0.25468	0.35231	1.07957	4.00473
46	0.65629	0.76687	0.88234	1.20947	0.25090	0.34708	1.06354	3.99510
47	0.64399	0.75545	0.86892	1.19464	0.24739	0.34222	1.04868	3.98683
48	0.63219	0.74443	0.85594	1.18095	0.24415	0.33774	1.03492	3.97961
49	0.62968	0.74179	0.85290	1.16850	0.24116	0.33360	1.02225	3.97961
50	0.62732	0.73930	0.85003	1.15725	0.23842	0.32981	1.01062	3.97961
51	0.62509	0.73696	0.84732	1.14715	0.23591	0.32634	1.00001	3.97961
52	0.62298	0.73475	0.84477	1.13813	0.23364	0.32320	0.99037	3.97961
53	0.62100	0.73266	0.84236	1.13017	0.23159	0.32037	0.98170	3.97961
54	0.61912	0.73068	0.84008	1.12321	0.22977	0.31784	0.97395	3.97961
55	0.61734	0.72881	0.83793	1.11724	0.22815	0.31561	0.96712	3.97961
56	0.61556	0.72704	0.83586	1.11133	0.22663	0.31353	0.96118	4.07165
57	0.61379	0.72537	0.83389	1.10547	0.22521	0.31150	0.95524	4.16369
58	0.61202	0.72380	0.83192	1.10000	0.22389	0.30956	0.94938	4.25573
59	0.61025	0.72233	0.82995	1.09499	0.22267	0.30771	0.94352	4.34777
60	0.60848	0.72096	0.82808	1.09033	0.22155	0.30596	0.93766	4.43981
61	0.60671	0.71969	0.82621	1.08600	0.22043	0.30430	0.93180	4.53185
62	0.60494	0.71842	0.82434	1.08187	0.21931	0.30273	0.92594	4.62389
63	0.60317	0.71715	0.82247	1.07794	0.21819	0.30116	0.92008	4.71593
64	0.60140	0.71588	0.82060	1.07421	0.21707	0.29959	0.91422	4.80796
65	0.60000	0.71461	0.81873	1.07068	0.21595	0.29802	0.90836	4.90000

Jefferson 2006 Time Period 2 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	53.80721	57.45047	66.75302	71.59830	4.32887	4.82789	35.04108	175.69359
4	42.16066	45.23714	52.55194	65.41631	3.98955	4.44944	32.29430	140.11946
5	35.17273	37.90913	44.03131	59.89969	3.68352	4.10814	29.81708	114.44339
6	30.51411	33.02376	38.35089	54.96913	3.40716	3.79992	27.58000	95.49657
7	27.18652	29.53426	34.29344	50.55553	3.15727	3.52123	25.55727	81.23010
8	24.69083	26.91710	31.25035	46.59866	2.93104	3.26892	23.72601	70.28706
9	22.74974	24.88158	28.88353	43.04608	2.72598	3.04022	22.06607	61.74889
10	21.19690	23.25310	26.99005	39.85197	2.53988	2.83267	20.55966	54.98032
11	19.92635	21.92073	25.44084	36.97612	2.37080	2.64410	19.19101	49.53407
12	18.86760	20.81042	24.14984	34.38335	2.21701	2.47258	17.94608	45.08920
13	17.97171	19.87097	23.05748	32.04283	2.07697	2.31639	16.81250	41.41187
14	17.20381	19.06567	22.12112	29.92732	1.94932	2.17402	15.77921	38.28896
15	16.53830	18.36780	21.30963	28.01312	1.83284	2.04413	14.83638	35.71077
16	15.95599	17.75710	20.59958	26.27905	1.72647	1.92549	13.97533	33.45882
17	15.44217	17.21829	19.97307	24.70668	1.62923	1.81704	13.18821	31.49774
18	14.98545	16.73933	19.41618	23.27948	1.54027	1.71783	12.46811	29.76932
19	14.57679	16.31081	18.91789	21.98306	1.45882	1.62699	11.80877	28.22826
20	13.96957	15.70240	18.21260	20.80458	1.38419	1.54376	11.20471	26.83940
21	13.19320	14.89216	17.27521	19.73262	1.31578	1.46746	10.65088	25.57506
22	12.48741	14.15558	16.42303	18.75711	1.25302	1.39746	10.14289	24.41397
23	11.84299	13.48305	15.64498	17.86911	1.19543	1.33324	9.67672	23.33931
24	11.25228	12.86657	14.93175	17.06064	1.14257	1.27428	9.24879	22.33826
25	10.70882	12.29940	14.27557	16.32462	1.09403	1.22015	8.85589	21.40102
26	10.20717	11.77586	13.66987	15.65476	1.04946	1.17044	8.49513	20.52003
27	9.74267	11.29110	13.10904	15.04545	1.00854	1.12480	8.16391	19.68974
28	9.31135	10.84097	12.58827	14.49167	0.97099	1.08292	7.85989	18.90599
29	8.90978	10.42188	12.10341	13.98905	0.93653	1.04449	7.58099	18.16579
30	8.53498	10.03073	11.65088	13.53359	0.90495	1.00926	7.32529	17.46709
31	8.18437	9.66481	11.22754	13.12178	0.87602	0.97700	7.09111	16.80815
32	7.85566	9.32177	10.83066	12.75054	0.84956	0.94749	6.87693	16.18777
33	7.54688	8.99952	10.45783	12.41709	0.82540	0.92055	6.68138	15.60549
34	7.25626	8.69622	10.10694	12.11900	0.80339	0.89600	6.50318	15.06007
35	6.98224	8.41025	9.77609	11.85410	0.78338	0.87369	6.34128	14.55131
36	6.72345	8.14017	9.46363	11.62053	0.76527	0.85349	6.19469	14.07803
37	6.47865	7.88469	9.16806	11.41666	0.74894	0.83528	6.06250	13.64004
38	6.24673	7.64266	8.88804	11.24107	0.73430	0.81894	5.94394	13.23597
39	6.02671	7.41303	8.62238	11.09255	0.72125	0.80439	5.83832	12.86493
40	5.81769	7.19489	8.37000	10.97010	0.70972	0.79154	5.74501	12.52573
41	5.61886	6.98739	8.12994	10.87290	0.69965	0.78031	5.66350	12.21703
42	5.42950	6.78977	7.90131	10.80029	0.69098	0.77064	5.59332	11.93686
43	5.24895	6.60134	7.68331	10.75181	0.68366	0.76247	5.53406	11.68352
44	5.07661	6.42148	7.47522	10.72710	0.67765	0.75577	5.48541	11.45445
45	4.91192	6.24961	7.27638	10.72604	0.67292	0.75049	5.44710	11.24729
46	4.75440	6.08522	7.08619	10.74858	0.66944	0.74660	5.41889	11.05902
47	4.60358	5.92782	6.90408	10.79490	0.66718	0.74409	5.40066	10.88595
48	4.45904	5.77697	6.72957	10.86529	0.66615	0.74294	5.39230	10.72445
49	4.45904	5.77697	6.72957	10.96024	0.66633	0.74314	5.39376	10.72445
50	4.45904	5.77697	6.72957	11.08035	0.66772	0.74470	5.40504	10.72445
51	4.45904	5.77697	6.72957	11.22646	0.67034	0.74761	5.42621	10.72445
52	4.45904	5.77697	6.72957	11.39955	0.67419	0.75191	5.45740	10.72445
53	4.45904	5.77697	6.72957	11.60079	0.67930	0.75761	5.49876	10.72445
54	4.45904	5.77697	6.72957	11.83160	0.68570	0.76474	5.55052	10.72445
55	4.45904	5.77697	6.72957	12.09356	0.69341	0.77335	5.61298	10.72445
56	4.88782	6.29895	7.34020	12.38856	0.70249	0.78347	5.68649	13.30721
57	5.31660	6.82093	7.95082	12.71870	0.71299	0.79518	5.77144	15.88997
58	5.74539	7.34291	8.56145	13.08639	0.72496	0.80853	5.86834	18.47272
59	6.17417	7.86489	9.17209	13.49438	0.73847	0.82360	5.97774	21.05547
60	6.60295	8.38687	9.78272	13.94573	0.75361	0.84048	6.10026	23.63821
61	7.03174	8.90885	10.39335	14.44392	0.77046	0.85927	6.23664	26.22096
62	7.46052	9.43083	11.00397	14.99285	0.78912	0.88008	6.38769	28.80371
63	7.88931	9.95282	11.61461	15.59692	0.80970	0.90304	6.55430	31.38649
64	8.31809	10.47480	12.22524	16.26106	0.83233	0.92828	6.73752	33.96924
65	8.74687	10.99677	12.83587	16.99077	0.85716	0.95597	6.93848	36.55199

Jefferson 2006 Time Period 2 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	1.74982	1.93564	2.40083	3.39663	1.84824	2.09006	13.27374	0.82775
4	1.59938	1.76923	2.19443	3.43178	1.77039	2.00203	12.71468	0.79173
5	1.50912	1.66939	2.07059	3.46693	1.69824	1.92044	12.19648	0.76184
6	1.44895	1.60282	1.98802	3.50208	1.63134	1.84479	11.71602	0.73761
7	1.40597	1.55528	1.92905	3.53723	1.56930	1.77463	11.27048	0.71858
8	1.37373	1.51962	1.88483	3.57237	1.51177	1.70957	10.85730	0.70432
9	1.34866	1.49189	1.85042	3.60752	1.45842	1.64924	10.47412	0.69442
10	1.32860	1.46970	1.82291	3.64267	1.40895	1.59329	10.11882	0.68845
11	1.31219	1.45154	1.80039	3.67782	1.36309	1.54143	9.78947	0.68605
12	1.29852	1.43641	1.78162	3.71297	1.32059	1.49338	9.48430	0.68683
13	1.28695	1.42361	1.76575	3.74812	1.28124	1.44888	9.20169	0.69044
14	1.27703	1.41264	1.75214	3.78327	1.24483	1.40771	8.94019	0.69655
15	1.26843	1.40314	1.74035	3.81841	1.21118	1.36965	8.69847	0.70483
16	1.26091	1.39481	1.73002	3.85356	1.18010	1.33451	8.47531	0.71498
17	1.25427	1.38747	1.72092	3.88871	1.15146	1.30212	8.26961	0.72671
18	1.24837	1.38095	1.71283	3.92386	1.12511	1.27232	8.08037	0.73974
19	1.24309	1.37511	1.70558	3.95901	1.10093	1.24497	7.90667	0.75383
20	1.24583	1.36685	1.69535	3.99416	1.07879	1.21994	7.74770	0.76873
21	1.25383	1.36922	1.69829	4.02930	1.05861	1.19711	7.60273	0.78422
22	1.26111	1.37138	1.70097	4.06445	1.04027	1.17638	7.47106	0.80010
23	1.26775	1.37335	1.70342	4.09960	1.02371	1.15765	7.35211	0.81617
24	1.27384	1.37515	1.70566	4.13475	1.00884	1.14084	7.24533	0.83226
25	1.27945	1.37681	1.70772	4.16990	0.99560	1.12587	7.15025	0.84822
26	1.28462	1.37835	1.70962	4.20505	0.98393	1.11267	7.06645	0.86391
27	1.28941	1.37977	1.71138	4.24020	0.97378	1.10119	6.99354	0.87920
28	1.29385	1.38109	1.71302	4.27534	0.96511	1.09138	6.93123	0.89398
29	1.29799	1.38231	1.71454	4.31049	0.95787	1.08319	6.87924	0.90817
30	1.30186	1.38346	1.71597	4.34564	0.95203	1.07659	6.83733	0.92169
31	1.30547	1.38453	1.71730	4.38079	0.94758	1.07156	6.80534	0.93449
32	1.30886	1.38554	1.71854	4.41594	0.94448	1.06806	6.78312	0.94652
33	1.31204	1.38648	1.71972	4.45109	0.94274	1.06608	6.77058	0.95775
34	1.31504	1.38737	1.72082	4.48624	0.94233	1.06563	6.76767	0.96819
35	1.31787	1.38821	1.72186	4.52139	0.94327	1.06668	6.77438	0.97783
36	1.32053	1.38900	1.72284	4.55653	0.94554	1.06926	6.79072	0.98671
37	1.32306	1.38974	1.72377	4.59168	0.94917	1.07336	6.81678	0.99486
38	1.32545	1.39045	1.72465	4.62683	0.95417	1.07901	6.85266	1.00234
39	1.32772	1.39113	1.72548	4.66198	0.96055	1.08623	6.89852	1.00924
40	1.32987	1.39177	1.72628	4.69713	0.96835	1.09505	6.95456	1.01563
41	1.33192	1.39237	1.72703	4.73228	0.97761	1.10552	7.02100	1.02162
42	1.33387	1.39295	1.72775	4.76743	0.98835	1.11767	7.09817	1.02735
43	1.33574	1.39351	1.72844	4.80257	1.00063	1.13155	7.18638	1.03294
44	1.33751	1.39403	1.72909	4.83772	1.01451	1.14725	7.28601	1.03857
45	1.33921	1.39454	1.72971	4.87287	1.03003	1.16480	7.39753	1.04439
46	1.34083	1.39502	1.73031	4.90802	1.04729	1.18431	7.52144	1.05060
47	1.34239	1.39548	1.73089	4.94317	1.06634	1.20586	7.65828	1.05741
48	1.34388	1.39592	1.73143	4.97832	1.08728	1.22954	7.80869	1.06504
49	1.38360	1.44833	1.79644	5.01347	1.11021	1.25547	7.97337	1.09972
50	1.42333	1.50073	1.86144	5.04862	1.13524	1.28377	8.15309	1.13440
51	1.46305	1.55314	1.92644	5.08376	1.16248	1.31457	8.34870	1.16908
52	1.50277	1.60555	1.99145	5.11892	1.19206	1.34803	8.56118	1.20376
53	1.54250	1.65795	2.05645	5.15406	1.22413	1.38430	8.79151	1.23845
54	1.58222	1.71036	2.12146	5.18921	1.25885	1.42356	9.04088	1.27312
55	1.62194	1.76277	2.18646	5.22436	1.29640	1.46602	9.31055	1.30781
56	1.66167	1.81518	2.25147	5.25951	1.33697	1.51189	9.60186	1.34249
57	1.70139	1.86758	2.31647	5.29466	1.38076	1.56142	9.91638	1.37717
58	1.74111	1.91999	2.38147	5.32980	1.42801	1.61485	10.25573	1.41185
59	1.78084	1.97240	2.44648	5.36495	1.47898	1.67249	10.62179	1.44653
60	1.82056	2.02480	2.51148	5.40010	1.53394	1.73464	11.01654	1.48121
61	1.86028	2.07721	2.57649	5.43525	1.59321	1.80167	11.44218	1.51589
62	1.90001	2.12962	2.64149	5.47040	1.65712	1.87394	11.90117	1.55057
63	1.93973	2.18202	2.70650	5.50555	1.72604	1.95188	12.39617	1.58525
64	1.97945	2.23443	2.77150	5.54070	1.80039	2.03595	12.93010	1.61993
65	2.01918	2.28684	2.83650	5.57584	1.88060	2.12666	13.50618	1.65461

Jefferson 2006 Time Period 3 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HQGV	LDDV	LDDT	HDDV	MC
3	7.23659	7.81630	9.16445	11.37750	1.05678	1.46185	4.47957	13.42498
4	5.11894	5.53075	6.48570	8.90405	1.00331	1.38789	4.25292	11.55894
5	3.99659	4.31580	5.06001	7.50763	0.95339	1.31883	4.04130	10.17685
6	3.31011	3.57099	4.18520	6.56895	0.90675	1.25431	3.84359	9.13366
7	2.85002	3.07089	3.59740	5.86971	0.86315	1.19400	3.65877	8.33265
8	2.58075	2.76823	3.23950	5.40427	0.82236	1.13758	3.48590	7.70792
9	2.37464	2.53706	2.96616	5.00603	0.78420	1.08479	3.32412	7.21366
10	2.20676	2.35035	2.74568	4.65230	0.74846	1.03536	3.17264	6.81743
11	2.06668	2.19599	2.56364	4.33590	0.71499	0.98905	3.03074	6.49582
12	1.94746	2.06588	2.41042	4.05137	0.68361	0.94564	2.89772	6.23168
13	1.84428	1.95443	2.27938	3.79438	0.65418	0.90493	2.77299	6.01225
14	1.75371	1.85764	2.16577	3.56138	0.62657	0.86674	2.65596	5.82789
15	1.67322	1.77257	2.06608	3.34944	0.60066	0.83089	2.54611	5.67123
16	1.60092	1.69704	1.97773	3.15609	0.57632	0.79723	2.44295	5.53659
17	1.53537	1.62935	1.89870	2.97923	0.55346	0.76560	2.34603	5.41949
18	1.47544	1.56821	1.82745	2.81703	0.53197	0.73588	2.25494	5.31647
19	1.42025	1.51257	1.76274	2.66793	0.51176	0.70793	2.16930	5.22474
20	1.35956	1.45292	1.69272	2.53614	0.49276	0.68164	2.08875	5.14212
21	1.30382	1.39734	1.62676	2.42325	0.47488	0.65691	2.01296	5.06688
22	1.25294	1.34672	1.56670	2.31983	0.45805	0.63363	1.94163	4.99764
23	1.20630	1.30041	1.51177	2.22494	0.44221	0.61171	1.87447	4.93333
24	1.16336	1.25787	1.46132	2.13777	0.42729	0.59107	1.81123	4.87311
25	1.12369	1.21865	1.41483	2.05758	0.41324	0.57164	1.75167	4.81634
26	1.08689	1.18236	1.37182	1.98371	0.40000	0.55332	1.69555	4.76255
27	1.05266	1.14869	1.33193	1.91558	0.38753	0.53607	1.64268	4.71139
28	1.02072	1.11734	1.29480	1.85269	0.37577	0.51981	1.59285	4.66262
29	0.99084	1.08809	1.26016	1.79456	0.36470	0.50449	1.54590	4.61610
30	0.96279	1.06071	1.22776	1.74078	0.35426	0.49005	1.50165	4.57172
31	0.93642	1.03504	1.19738	1.69098	0.34442	0.47644	1.45996	4.52947
32	0.91156	1.01090	1.16883	1.64482	0.33515	0.46362	1.42067	4.48932
33	0.88807	0.98816	1.14194	1.60201	0.32642	0.45154	1.38365	4.45133
34	0.86584	0.96670	1.11657	1.56226	0.31819	0.44016	1.34879	4.41550
35	0.84475	0.94640	1.09259	1.52534	0.31045	0.42945	1.31596	4.38192
36	0.82471	0.92717	1.06988	1.49103	0.30316	0.41937	1.28506	4.35061
37	0.80563	0.90892	1.04835	1.45912	0.29630	0.40988	1.25599	4.32162
38	0.78745	0.89158	1.02788	1.42944	0.28986	0.40096	1.22866	4.29497
39	0.77009	0.87508	1.00842	1.40183	0.28380	0.39258	1.20299	4.27068
40	0.75348	0.85934	0.98987	1.37614	0.27811	0.38472	1.17888	4.24873
41	0.73758	0.84432	0.97217	1.35224	0.27278	0.37734	1.15628	4.22912
42	0.72233	0.82997	0.95526	1.33000	0.26778	0.37043	1.13511	4.21176
43	0.70769	0.81624	0.93909	1.30933	0.26311	0.36397	1.11530	4.19654
44	0.69361	0.80308	0.92361	1.29012	0.25875	0.35793	1.09681	4.18339
45	0.68006	0.79046	0.90876	1.27228	0.25468	0.35231	1.07957	4.17210
46	0.66701	0.77834	0.89451	1.25575	0.25090	0.34708	1.06354	4.16247
47	0.65442	0.76670	0.88083	1.24044	0.24739	0.34222	1.04868	4.15421
48	0.64233	0.75544	0.86759	1.22629	0.24415	0.33774	1.03492	4.14700
49	0.63958	0.75254	0.86425	1.21337	0.24116	0.33360	1.02225	4.14700
50	0.63699	0.74982	0.86109	1.20168	0.23842	0.32981	1.01062	4.14700
51	0.63454	0.74725	0.85812	1.19116	0.23591	0.32634	1.00001	4.14700
52	0.63224	0.74482	0.85532	1.18176	0.23364	0.32320	0.99037	4.14700
53	0.63006	0.74253	0.85267	1.17344	0.23159	0.32037	0.98170	4.14700
54	0.62800	0.74036	0.85017	1.16615	0.22977	0.31784	0.97395	4.14700
55	0.62604	0.73830	0.84780	1.15986	0.22815	0.31561	0.96712	4.14700
56	0.62410	0.73534	0.84612	1.15455	0.22675	0.31367	0.96118	4.23897
57	0.65616	0.76888	0.88456	1.15019	0.22556	0.31202	0.95612	4.33093
58	0.67136	0.78430	0.90310	1.14676	0.22457	0.31065	0.95192	4.42290
59	0.68663	0.79982	0.92174	1.14425	0.22378	0.30956	0.94858	4.51486
60	0.70199	0.81541	0.94048	1.14265	0.22319	0.30874	0.94608	4.60683
61	0.71742	0.83109	0.95931	1.14195	0.22280	0.30820	0.94441	4.69880
62	0.73291	0.84683	0.97822	1.14216	0.22260	0.30793	0.94358	4.79077
63	0.74847	0.86264	0.99720	1.14329	0.22260	0.30793	0.94358	4.88273
64	0.76409	0.87851	1.01626	1.14534	0.22280	0.30820	0.94441	4.97470
65	0.77976	0.89445	1.03538	1.14832	0.22319	0.30874	0.94608	5.06667

Jefferson 2006 Time Period 3 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	53.80826	57.45464	66.75777	72.29243	4.32887	4.82789	35.04108	180.08734
4	42.16144	45.24025	52.55550	66.05055	3.98955	4.44944	32.29430	143.62360
5	35.17337	37.91162	44.03415	60.48044	3.68352	4.10814	29.81708	117.30545
6	30.51463	33.02583	38.35326	55.50208	3.40716	3.79992	27.58000	97.88474
7	27.18698	29.53603	34.29547	51.04565	3.15727	3.52123	25.55727	83.26155
8	24.69122	26.91864	31.25212	47.05046	2.93104	3.26892	23.72601	72.04483
9	22.75009	24.88295	28.88510	43.46347	2.72598	3.04022	22.06607	63.29311
10	21.19722	23.25433	26.99147	40.23834	2.53988	2.83267	20.55966	56.35526
11	19.92664	21.92184	25.44212	37.33461	2.37080	2.64410	19.19101	50.77283
12	18.86786	20.81145	24.15102	34.71671	2.21701	2.47258	17.94608	46.21681
13	17.97197	19.87192	23.05856	32.35347	2.07697	2.31639	16.81250	42.44749
14	17.20404	19.06654	22.12215	30.21747	1.94932	2.17402	15.77921	39.28751
15	16.53851	18.36861	21.31058	28.28473	1.83284	2.04413	14.83638	36.60384
16	15.95619	17.75786	20.60046	26.53384	1.72647	1.92549	13.97533	34.29558
17	15.44236	17.21901	19.97389	24.94620	1.62923	1.81704	13.18821	32.28543
18	14.98563	16.74002	19.41696	23.50517	1.54027	1.71783	12.46811	30.51378
19	14.57696	16.31145	18.91864	22.19618	1.45882	1.62699	11.80877	28.93419
20	13.96974	15.70301	18.21330	21.00627	1.38419	1.54376	11.20471	27.51057
21	13.19336	14.89277	17.27589	19.92393	1.31578	1.46746	10.65088	26.21468
22	12.48757	14.15617	16.42372	18.93898	1.25302	1.39746	10.14289	25.02454
23	11.84314	13.48363	15.64565	18.04236	1.19543	1.33324	9.67672	23.92299
24	11.25243	12.86714	14.93241	17.22604	1.14257	1.27428	9.24879	22.89690
25	10.70897	12.29996	14.27622	16.48288	1.09403	1.22015	8.85589	21.93622
26	10.20731	11.77641	13.67051	15.80653	1.04946	1.17044	8.49513	21.03320
27	9.74281	11.29164	13.10967	15.19132	1.00854	1.12480	8.16391	20.18217
28	9.31149	10.84150	12.58889	14.63217	0.97099	1.08292	7.85989	19.37878
29	8.90992	10.42240	12.10402	14.12467	0.93653	1.04449	7.58099	18.62009
30	8.53512	10.03125	11.65148	13.66480	0.90495	1.00926	7.32529	17.90392
31	8.18449	9.66533	11.22813	13.24900	0.87602	0.97700	7.09111	17.22849
32	7.85579	9.32228	10.83125	12.87416	0.84956	0.94749	6.87693	16.59261
33	7.54700	9.00002	10.45841	12.53748	0.82540	0.92055	6.68138	15.99575
34	7.25638	8.69671	10.10751	12.23649	0.80339	0.89600	6.50318	15.43669
35	6.98236	8.41074	9.77666	11.96903	0.78338	0.87369	6.34128	14.91521
36	6.72357	8.14066	9.46419	11.73319	0.76527	0.85349	6.19469	14.43009
37	6.47877	7.88517	9.16861	11.52734	0.74894	0.83528	6.06250	13.98115
38	6.24685	7.64313	8.88859	11.35005	0.73430	0.81894	5.94394	13.56698
39	6.02682	7.41351	8.62293	11.20009	0.72125	0.80439	5.83832	13.18665
40	5.81780	7.19536	8.37055	11.07646	0.70972	0.79154	5.74501	12.83898
41	5.61897	6.98786	8.13048	10.97832	0.69965	0.78031	5.66350	12.52255
42	5.42961	6.79024	7.90184	10.90500	0.69098	0.77064	5.59332	12.23539
43	5.24906	6.60180	7.68384	10.85605	0.68366	0.76247	5.53406	11.97571
44	5.07671	6.42194	7.47575	10.83110	0.67765	0.75577	5.48541	11.74091
45	4.91203	6.25007	7.27691	10.83003	0.67292	0.75049	5.44710	11.52856
46	4.75450	6.08567	7.08671	10.85279	0.66944	0.74660	5.41889	11.33558
47	4.60368	5.92826	6.90460	10.89956	0.66718	0.74409	5.40066	11.15819
48	4.45914	5.77742	6.73008	10.97063	0.66615	0.74294	5.39230	10.99265
49	4.45914	5.77742	6.73008	11.06650	0.66633	0.74314	5.39376	10.99265
50	4.45914	5.77742	6.73008	11.18778	0.66772	0.74470	5.40504	10.99265
51	4.45914	5.77742	6.73008	11.33530	0.67034	0.74761	5.42621	10.99265
52	4.45914	5.77742	6.73008	11.51007	0.67419	0.75191	5.45740	10.99265
53	4.45914	5.77742	6.73008	11.71326	0.67930	0.75761	5.49876	10.99265
54	4.45914	5.77742	6.73008	11.94631	0.68570	0.76474	5.55052	10.99265
55	4.45914	5.77742	6.73008	12.21081	0.69341	0.77335	5.61298	10.99265
56	4.88794	6.29949	7.34082	12.50867	0.70249	0.78347	5.68649	13.63999
57	5.31675	6.82157	7.95156	12.84201	0.71299	0.79518	5.77144	16.28734
58	5.74556	7.34364	8.56230	13.21326	0.72496	0.80853	5.86834	18.93468
59	6.17436	7.86573	9.17305	13.62521	0.73847	0.82360	5.97774	21.58202
60	6.60316	8.38780	9.78378	14.08094	0.75361	0.84048	6.10026	24.22937
61	7.03197	8.90988	10.39452	14.58395	0.77046	0.85927	6.23664	26.87671
62	7.46077	9.43195	11.00526	15.13821	0.78912	0.88008	6.38769	29.52406
63	7.88958	9.95403	11.61601	15.74813	0.80970	0.90304	6.55430	32.17140
64	8.31838	10.47611	12.22675	16.41872	0.83233	0.92828	6.73752	34.81874
65	8.74718	10.99818	12.83748	17.15550	0.85716	0.95597	6.93848	37.46608

Jefferson 2006 Time Period 3 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	1.75267	1.93877	2.40474	3.40152	1.84824	2.09006	13.27374	0.81913
4	1.60200	1.77209	2.19800	3.43672	1.77039	2.00203	12.71468	0.78349
5	1.51159	1.67209	2.07396	3.47192	1.69824	1.92044	12.19648	0.75391
6	1.45131	1.60541	1.99126	3.50712	1.63134	1.84479	11.71602	0.72993
7	1.40827	1.55779	1.93220	3.54231	1.56930	1.77463	11.27048	0.71110
8	1.37598	1.52208	1.88789	3.57751	1.51177	1.70957	10.85730	0.69700
9	1.35086	1.49430	1.85344	3.61271	1.45842	1.64924	10.47412	0.68719
10	1.33077	1.47207	1.82587	3.64791	1.40895	1.59329	10.11882	0.68129
11	1.31433	1.45389	1.80332	3.68311	1.36309	1.54143	9.78947	0.67891
12	1.30064	1.43874	1.78452	3.71831	1.32059	1.49338	9.48430	0.67968
13	1.28904	1.42591	1.76862	3.75351	1.28124	1.44888	9.20169	0.68326
14	1.27911	1.41493	1.75499	3.78871	1.24483	1.40771	8.94019	0.68930
15	1.27050	1.40540	1.74318	3.82391	1.21118	1.36965	8.69847	0.69750
16	1.26297	1.39707	1.73284	3.85910	1.18010	1.33451	8.47531	0.70754
17	1.25632	1.38972	1.72372	3.89431	1.15146	1.30212	8.26961	0.71914
18	1.25041	1.38318	1.71561	3.92951	1.12511	1.27232	8.08037	0.73204
19	1.24512	1.37733	1.70836	3.96470	1.10093	1.24497	7.90667	0.74598
20	1.24786	1.36906	1.69810	3.99991	1.07879	1.21994	7.74770	0.76073
21	1.25588	1.37143	1.70106	4.03510	1.05861	1.19711	7.60273	0.77606
22	1.26317	1.37359	1.70374	4.07030	1.04027	1.17638	7.47106	0.79177
23	1.26982	1.37557	1.70619	4.10550	1.02371	1.15765	7.35211	0.80768
24	1.27592	1.37737	1.70843	4.14070	1.00884	1.14084	7.24533	0.82360
25	1.28153	1.37904	1.71049	4.17590	0.99560	1.12587	7.15025	0.83940
26	1.28672	1.38057	1.71240	4.21110	0.98393	1.11267	7.06645	0.85492
27	1.29151	1.38200	1.71416	4.24629	0.97378	1.10119	6.99354	0.87005
28	1.29597	1.38332	1.71581	4.28150	0.96511	1.09138	6.93123	0.88468
29	1.30011	1.38455	1.71733	4.31669	0.95787	1.08319	6.87924	0.89872
30	1.30398	1.38569	1.71875	4.35189	0.95203	1.07659	6.83733	0.91210
31	1.30760	1.38677	1.72009	4.38709	0.94758	1.07156	6.80534	0.92477
32	1.31100	1.38777	1.72134	4.42229	0.94448	1.06806	6.78312	0.93667
33	1.31419	1.38872	1.72251	4.45749	0.94274	1.06608	6.77058	0.94779
34	1.31719	1.38961	1.72361	4.49269	0.94233	1.06563	6.76767	0.95811
35	1.32002	1.39045	1.72466	4.52789	0.94327	1.06668	6.77438	0.96766
36	1.32269	1.39124	1.72564	4.56309	0.94554	1.06926	6.79072	0.97644
37	1.32522	1.39199	1.72657	4.59829	0.94917	1.07336	6.81678	0.98451
38	1.32761	1.39270	1.72745	4.63349	0.95417	1.07901	6.85266	0.99191
39	1.32988	1.39337	1.72829	4.66868	0.96055	1.08623	6.89852	0.99874
40	1.33204	1.39401	1.72908	4.70389	0.96835	1.09505	6.95456	1.00506
41	1.33410	1.39462	1.72984	4.73908	0.97761	1.10552	7.02100	1.01099
42	1.33605	1.39520	1.73055	4.77429	0.98835	1.11767	7.09817	1.01666
43	1.33791	1.39575	1.73124	4.80948	1.00063	1.13155	7.18638	1.02219
44	1.33969	1.39628	1.73190	4.84468	1.01451	1.14725	7.28601	1.02776
45	1.34140	1.39678	1.73252	4.87988	1.03003	1.16480	7.39753	1.03352
46	1.34302	1.39727	1.73312	4.91508	1.04729	1.18431	7.52144	1.03967
47	1.34458	1.39773	1.73369	4.95028	1.06634	1.20586	7.65828	1.04641
48	1.34607	1.39817	1.73424	4.98548	1.08728	1.22954	7.80869	1.05396
49	1.38586	1.45066	1.79935	5.02068	1.11021	1.25547	7.97337	1.08828
50	1.42565	1.50315	1.86446	5.05588	1.13524	1.28377	8.15309	1.12260
51	1.46544	1.55564	1.92957	5.09108	1.16248	1.31457	8.34870	1.15692
52	1.50522	1.60813	1.99468	5.12628	1.19206	1.34803	8.56118	1.19124
53	1.54501	1.66063	2.05979	5.16147	1.22413	1.38430	8.79151	1.22556
54	1.58480	1.71312	2.12490	5.19667	1.25885	1.42356	9.04088	1.25988
55	1.62459	1.76561	2.19001	5.23187	1.29640	1.46602	9.31055	1.29420
56	1.66438	1.81810	2.25512	5.26707	1.33697	1.51189	9.60186	1.32852
57	1.70417	1.87059	2.32023	5.30227	1.38076	1.56142	9.91638	1.36284
58	1.74396	1.92308	2.38534	5.33747	1.42801	1.61485	10.25573	1.39716
59	1.78374	1.97557	2.45045	5.37267	1.47898	1.67249	10.62179	1.43148
60	1.82353	2.02806	2.51556	5.40787	1.53394	1.73464	11.01654	1.46579
61	1.86332	2.08056	2.58066	5.44307	1.59321	1.80167	11.44218	1.50011
62	1.90311	2.13305	2.64577	5.47827	1.65712	1.87394	11.90117	1.53443
63	1.94290	2.18554	2.71088	5.51347	1.72604	1.95188	12.39617	1.56875
64	1.98269	2.23803	2.77599	5.54866	1.80039	2.03595	12.93010	1.60307
65	2.02247	2.29052	2.84110	5.58387	1.88060	2.12666	13.50618	1.63739

Jefferson 2006 Time Period 4 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	5.72682	6.56596	7.70300	8.60613	1.05678	1.46185	4.47957	11.98112
4	4.19755	4.81537	5.65353	7.10241	1.00331	1.38789	4.25292	10.09321
5	3.35788	3.84705	4.51812	6.17179	0.95339	1.31883	4.04130	8.69493
6	2.83056	3.23569	3.80045	5.49638	0.90675	1.25431	3.84359	7.63952
7	2.46980	2.81574	3.30707	4.96266	0.86315	1.19400	3.65877	6.82911
8	2.23921	2.54266	2.98414	4.56602	0.82236	1.13758	3.48590	6.19706
9	2.06182	2.33160	2.73469	4.21942	0.78420	1.08479	3.32412	5.69702
10	1.91854	2.16065	2.53296	3.90956	0.74846	1.03536	3.17264	5.29614
11	1.80006	2.01887	2.36594	3.63125	0.71499	0.98905	3.03074	4.97077
12	1.70019	1.89896	2.22495	3.38039	0.68361	0.94564	2.89772	4.70353
13	1.61463	1.79587	2.10399	3.15357	0.65418	0.90493	2.77299	4.48154
14	1.54031	1.70601	1.99876	2.94796	0.62657	0.86674	2.65596	4.29501
15	1.47498	1.62672	1.90611	2.76114	0.60066	0.83089	2.54611	4.13652
16	1.41696	1.55603	1.82369	2.59101	0.57632	0.79723	2.44295	4.00029
17	1.36496	1.49241	1.74969	2.43578	0.55346	0.76560	2.34603	3.88183
18	1.31798	1.43469	1.68271	2.29388	0.53197	0.73588	2.25494	3.77759
19	1.27522	1.38194	1.62164	2.16392	0.51176	0.70793	2.16930	3.68479
20	1.22366	1.32552	1.55555	2.04715	0.49276	0.68164	2.08875	3.60120
21	1.17237	1.27399	1.49430	1.94371	0.47488	0.65691	2.01296	3.52508
22	1.12563	1.22708	1.43855	1.84898	0.45805	0.63363	1.94163	3.45503
23	1.08285	1.18419	1.38758	1.76212	0.44221	0.61171	1.87447	3.38997
24	1.04352	1.14480	1.34080	1.68240	0.42729	0.59107	1.81123	3.32904
25	1.00724	1.10851	1.29770	1.60913	0.41324	0.57164	1.75167	3.27161
26	0.97365	1.07495	1.25785	1.54172	0.40000	0.55332	1.69555	3.21719
27	0.94246	1.04382	1.22090	1.47965	0.38753	0.53607	1.64268	3.16543
28	0.91340	1.01487	1.18653	1.42243	0.37577	0.51981	1.59285	3.11609
29	0.88626	0.98785	1.15448	1.36963	0.36470	0.50449	1.54590	3.06902
30	0.86085	0.96259	1.12452	1.32089	0.35426	0.49005	1.50165	3.02412
31	0.83699	0.93891	1.09644	1.27584	0.34442	0.47644	1.45996	2.98137
32	0.81455	0.91667	1.07006	1.23419	0.33515	0.46362	1.42067	2.94075
33	0.79338	0.89572	1.04524	1.19565	0.32642	0.45154	1.38365	2.90232
34	0.77339	0.87597	1.02184	1.15997	0.31819	0.44016	1.34879	2.86607
35	0.75447	0.85730	0.99972	1.12692	0.31045	0.42945	1.31596	2.83210
36	0.73653	0.83962	0.97880	1.09631	0.30316	0.41937	1.28506	2.80042
37	0.71949	0.82287	0.95896	1.06794	0.29630	0.40988	1.25599	2.77109
38	0.70328	0.80695	0.94013	1.04165	0.28986	0.40096	1.22866	2.74412
39	0.68784	0.79181	0.92222	1.01728	0.28380	0.39258	1.20299	2.71955
40	0.67310	0.77739	0.90517	0.99471	0.27811	0.38472	1.17888	2.69734
41	0.65903	0.76364	0.88891	0.97381	0.27278	0.37734	1.15628	2.67750
42	0.64556	0.75051	0.87339	0.95446	0.26778	0.37043	1.13511	2.65994
43	0.63266	0.73795	0.85856	0.93658	0.26311	0.36397	1.11530	2.64455
44	0.62029	0.72593	0.84437	0.92005	0.25875	0.35793	1.09681	2.63124
45	0.60841	0.71441	0.83077	0.90482	0.25468	0.35231	1.07957	2.61982
46	0.59699	0.70336	0.81773	0.89080	0.25090	0.34708	1.06354	2.61008
47	0.58601	0.69275	0.80521	0.87792	0.24739	0.34222	1.04868	2.60172
48	0.57547	0.68254	0.79316	0.86615	0.24415	0.33774	1.03492	2.59442
49	0.57397	0.68097	0.79138	0.85557	0.24116	0.33360	1.02225	2.59442
50	0.57257	0.67949	0.78969	0.84607	0.23842	0.32981	1.01062	2.59442
51	0.57124	0.67810	0.78810	0.83761	0.23591	0.32634	1.00001	2.59442
52	0.56998	0.67678	0.78660	0.83014	0.23364	0.32320	0.99037	2.59442
53	0.56879	0.67554	0.78518	0.82362	0.23159	0.32037	0.98170	2.59442
54	0.56767	0.67436	0.78384	0.81802	0.22977	0.31784	0.97395	2.59442
55	0.56661	0.67325	0.78257	0.81332	0.22815	0.31561	0.96712	2.59442
56	0.58246	0.68937	0.80193	0.80949	0.22675	0.31367	0.96118	2.68746
57	0.59836	0.70554	0.82135	0.80652	0.22556	0.31202	0.95612	2.78051
58	0.61431	0.72176	0.84082	0.80439	0.22457	0.31065	0.95192	2.87355
59	0.63031	0.73803	0.86035	0.80310	0.22378	0.30956	0.94858	2.96660
60	0.64634	0.75434	0.87993	0.80264	0.22319	0.30874	0.94608	3.05964
61	0.66242	0.77069	0.89955	0.80301	0.22280	0.30820	0.94441	3.15269
62	0.67853	0.78709	0.91922	0.80421	0.22260	0.30793	0.94358	3.24573
63	0.69468	0.80351	0.93893	0.80626	0.22260	0.30793	0.94358	3.33878
64	0.71086	0.81998	0.95868	0.80916	0.22280	0.30820	0.94441	3.43182
65	0.72707	0.83647	0.97846	0.81294	0.22319	0.30874	0.94608	3.52487

Jefferson 2006 Time Period 4 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	53.80721	57.45047	66.75302	68.00768	4.32887	4.82789	35.04108	145.05290
4	42.16066	45.23714	52.55194	62.13571	3.98955	4.44944	32.29430	115.68285
5	35.17273	37.90913	44.03131	56.89574	3.68352	4.10814	29.81708	94.48470
6	30.51411	33.02376	38.35089	52.21245	3.40716	3.79992	27.58000	78.84209
7	27.18652	29.53426	34.29344	48.02017	3.15727	3.52123	25.55727	67.06372
8	24.69083	26.91710	31.25035	44.26175	2.93104	3.26892	23.72601	58.02913
9	22.74974	24.88158	28.88353	40.88733	2.72598	3.04022	22.06607	50.97998
10	21.19690	23.25310	26.99005	37.85341	2.53988	2.83267	20.55966	45.39180
11	19.92635	21.92073	25.44084	35.12180	2.37080	2.64410	19.19101	40.89540
12	18.86760	20.81042	24.14984	32.65904	2.21701	2.47258	17.94608	37.22572
13	17.97171	19.87097	23.05748	30.43588	2.07697	2.31639	16.81250	34.18971
14	17.20381	19.06567	22.12112	28.42648	1.94932	2.17402	15.77921	31.64447
15	16.53830	18.36780	21.30963	26.60828	1.83284	2.04413	14.83638	29.48288
16	15.95599	17.75710	20.59958	24.96117	1.72647	1.92549	13.97533	27.62367
17	15.44217	17.21829	19.97307	23.46765	1.62923	1.81704	13.18821	26.00458
18	14.98545	16.73933	19.41618	22.11203	1.54027	1.71783	12.46811	24.57759
19	14.57679	16.31081	18.91789	20.88062	1.45882	1.62699	11.80877	23.30530
20	13.96957	15.70240	18.21260	19.76125	1.38419	1.54376	11.20471	22.15865
21	13.19320	14.89216	17.27521	18.74306	1.31578	1.46746	10.65088	21.11482
22	12.48741	14.15558	16.42303	17.81645	1.25302	1.39746	10.14289	20.15622
23	11.84299	13.48305	15.64498	16.97298	1.19543	1.33324	9.67672	19.26900
24	11.25228	12.86657	14.93175	16.20505	1.14257	1.27428	9.24879	18.44250
25	10.70882	12.29940	14.27557	15.50595	1.09403	1.22015	8.85589	17.66872
26	10.20717	11.77586	13.66987	14.86967	1.04946	1.17044	8.49513	16.94138
27	9.74267	11.29110	13.10904	14.29092	1.00854	1.12480	8.16391	16.25591
28	9.31135	10.84097	12.58827	13.76492	0.97099	1.08292	7.85989	15.60882
29	8.90978	10.42188	12.10341	13.28750	0.93653	1.04449	7.58099	14.99772
30	8.53498	10.03073	11.65088	12.85488	0.90495	1.00926	7.32529	14.42087
31	8.18437	9.66481	11.22754	12.46373	0.87602	0.97700	7.09111	13.87684
32	7.85566	9.32177	10.83066	12.11110	0.84956	0.94749	6.87693	13.36466
33	7.54688	8.99952	10.45783	11.79438	0.82540	0.92055	6.68138	12.88392
34	7.25626	8.69622	10.10694	11.51123	0.80339	0.89600	6.50318	12.43362
35	6.98224	8.41025	9.77609	11.25962	0.78338	0.87369	6.34128	12.01358
36	6.72345	8.14017	9.46363	11.03776	0.76527	0.85349	6.19469	11.62284
37	6.47865	7.88469	9.16806	10.84411	0.74894	0.83528	6.06250	11.26124
38	6.24673	7.64266	8.88804	10.67733	0.73430	0.81894	5.94394	10.92764
39	6.02671	7.41303	8.62238	10.53626	0.72125	0.80439	5.83832	10.62130
40	5.81769	7.19489	8.37000	10.41995	0.70972	0.79154	5.74501	10.34127
41	5.61886	6.98739	8.12994	10.32763	0.69965	0.78031	5.66350	10.08640
42	5.42950	6.78977	7.90131	10.25866	0.69098	0.77064	5.59332	9.85510
43	5.24895	6.60134	7.68331	10.21260	0.68366	0.76247	5.53406	9.64594
44	5.07661	6.42148	7.47522	10.18914	0.67765	0.75577	5.48541	9.45681
45	4.91192	6.24961	7.27638	10.18813	0.67292	0.75049	5.44710	9.28578
46	4.75440	6.08522	7.08619	10.20954	0.66944	0.74660	5.41889	9.13034
47	4.60358	5.92782	6.90408	10.25353	0.66718	0.74409	5.40066	8.98746
48	4.45904	5.77697	6.72957	10.32040	0.66615	0.74294	5.39230	8.85412
49	4.45904	5.77697	6.72957	10.41058	0.66633	0.74314	5.39376	8.85412
50	4.45904	5.77697	6.72957	10.52467	0.66772	0.74470	5.40504	8.85412
51	4.45904	5.77697	6.72957	10.66345	0.67034	0.74761	5.42621	8.85412
52	4.45904	5.77697	6.72957	10.82787	0.67419	0.75191	5.45740	8.85412
53	4.45904	5.77697	6.72957	11.01901	0.67930	0.75761	5.49876	8.85412
54	4.45904	5.77697	6.72957	11.23825	0.68570	0.76474	5.55052	8.85412
55	4.45904	5.77697	6.72957	11.48707	0.69341	0.77335	5.61298	8.85412
56	4.88782	6.29895	7.34020	11.76728	0.70249	0.78347	5.68649	10.98645
57	5.31660	6.82093	7.95082	12.08086	0.71299	0.79518	5.77144	13.11878
58	5.74539	7.34291	8.56145	12.43011	0.72496	0.80853	5.86834	15.25111
59	6.17417	7.86489	9.17209	12.81764	0.73847	0.82360	5.97774	17.38342
60	6.60295	8.38687	9.78272	13.24635	0.75361	0.84048	6.10026	19.51575
61	7.03174	8.90885	10.39335	13.71956	0.77046	0.85927	6.23664	21.64809
62	7.46052	9.43083	11.00397	14.24096	0.78912	0.88008	6.38769	23.78040
63	7.88931	9.95282	11.61461	14.81474	0.80970	0.90304	6.55430	25.91273
64	8.31809	10.47480	12.22524	15.44558	0.83233	0.92828	6.73752	28.04506
65	8.74687	10.99677	12.83587	16.13869	0.85716	0.95597	6.93848	30.17737

Jefferson 2006 Time Period 4 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HOGV	LDDV	LDDT	HDDV	MC
3	1.72411	1.90751	2.36569	3.35837	1.84824	2.09006	13.27374	0.90987
4	1.57589	1.74352	2.16231	3.39313	1.77039	2.00203	12.71468	0.87028
5	1.48695	1.64512	2.04028	3.42788	1.69824	1.92044	12.19648	0.83742
6	1.42766	1.57953	1.95893	3.46263	1.63134	1.84479	11.71602	0.81079
7	1.38532	1.53267	1.90082	3.49738	1.56930	1.77463	11.27048	0.78987
8	1.35355	1.49753	1.85724	3.53214	1.51177	1.70957	10.85730	0.77420
9	1.32885	1.47020	1.82334	3.56689	1.45842	1.64924	10.47412	0.76331
10	1.30909	1.44834	1.79622	3.60164	1.40895	1.59329	10.11882	0.75676
11	1.29292	1.43045	1.77404	3.63640	1.36309	1.54143	9.78947	0.75411
12	1.27944	1.41554	1.75555	3.67115	1.32059	1.49338	9.48430	0.75497
13	1.26804	1.40292	1.73990	3.70590	1.28124	1.44888	9.20169	0.75894
14	1.25827	1.39211	1.72649	3.74065	1.24483	1.40771	8.94019	0.76566
15	1.24980	1.38274	1.71487	3.77541	1.21118	1.36965	8.69847	0.77476
16	1.24238	1.37454	1.70470	3.81016	1.18010	1.33451	8.47531	0.78591
17	1.23585	1.36731	1.69573	3.84491	1.15146	1.30212	8.26961	0.79880
18	1.23003	1.36088	1.68776	3.87967	1.12511	1.27232	8.08037	0.81313
19	1.22483	1.35512	1.68062	3.91442	1.10093	1.24497	7.90667	0.82862
20	1.22753	1.34698	1.67054	3.94917	1.07879	1.21994	7.74770	0.84500
21	1.23541	1.34933	1.67344	3.98392	1.05861	1.19711	7.60273	0.86203
22	1.24258	1.35146	1.67609	4.01867	1.04027	1.17638	7.47106	0.87948
23	1.24913	1.35340	1.67850	4.05343	1.02371	1.15765	7.35211	0.89714
24	1.25513	1.35518	1.68072	4.08818	1.00884	1.14084	7.24533	0.91483
25	1.26065	1.35682	1.68275	4.12293	0.99560	1.12587	7.15025	0.93238
26	1.26575	1.35834	1.68463	4.15768	0.98393	1.11267	7.06645	0.94962
27	1.27047	1.35974	1.68637	4.19244	0.97378	1.10119	6.99354	0.96643
28	1.27485	1.36104	1.68799	4.22719	0.96511	1.09138	6.93123	0.98268
29	1.27893	1.36226	1.68949	4.26194	0.95787	1.08319	6.87924	0.99827
30	1.28274	1.36339	1.69089	4.29669	0.95203	1.07659	6.83733	1.01314
31	1.28630	1.36445	1.69221	4.33145	0.94758	1.07156	6.80534	1.02720
32	1.28964	1.36544	1.69344	4.36620	0.94448	1.06806	6.78312	1.04042
33	1.29277	1.36637	1.69460	4.40096	0.94274	1.06608	6.77058	1.05277
34	1.29572	1.36724	1.69569	4.43571	0.94233	1.06563	6.76767	1.06424
35	1.29851	1.36807	1.69671	4.47046	0.94327	1.06668	6.77438	1.07484
36	1.30114	1.36885	1.69768	4.50521	0.94554	1.06926	6.79072	1.08460
37	1.30362	1.36959	1.69860	4.53996	0.94917	1.07336	6.81678	1.09356
38	1.30598	1.37029	1.69947	4.57472	0.95417	1.07901	6.85266	1.10179
39	1.30821	1.37096	1.70029	4.60947	0.96055	1.08623	6.89852	1.10937
40	1.31034	1.37159	1.70108	4.64422	0.96835	1.09505	6.95456	1.11639
41	1.31236	1.37219	1.70182	4.67897	0.97761	1.10552	7.02100	1.12298
42	1.31428	1.37276	1.70253	4.71373	0.98835	1.11767	7.09817	1.12927
43	1.31612	1.37330	1.70321	4.74848	1.00063	1.13155	7.18638	1.13542
44	1.31787	1.37383	1.70385	4.78323	1.01451	1.14725	7.28601	1.14161
45	1.31954	1.37432	1.70447	4.81799	1.03003	1.16480	7.39753	1.14801
46	1.32114	1.37480	1.70506	4.85274	1.04729	1.18431	7.52144	1.15484
47	1.32267	1.37525	1.70562	4.88749	1.06634	1.20586	7.65828	1.16232
48	1.32414	1.37569	1.70617	4.92225	1.08728	1.22954	7.80869	1.17071
49	1.32638	1.42734	1.77022	4.95700	1.11021	1.25547	7.97337	1.20883
50	1.40242	1.47899	1.83428	4.99175	1.13524	1.28377	8.15309	1.24695
51	1.44156	1.53064	1.89834	5.02650	1.16248	1.31457	8.34870	1.28507
52	1.48070	1.58229	1.96240	5.06126	1.19206	1.34803	8.56118	1.32319
53	1.51984	1.63394	2.02646	5.09601	1.22413	1.38430	8.79151	1.36131
54	1.55898	1.68559	2.09052	5.13076	1.25885	1.42356	9.04088	1.39944
55	1.59812	1.73724	2.15458	5.16551	1.29640	1.46602	9.31055	1.43756
56	1.63726	1.78889	2.21863	5.20027	1.33697	1.51189	9.60186	1.47568
57	1.67640	1.84054	2.28269	5.23502	1.38076	1.56142	9.91638	1.51380
58	1.71554	1.89219	2.34675	5.26977	1.42801	1.61485	10.25573	1.55192
59	1.75468	1.94384	2.41081	5.30453	1.47898	1.67249	10.62179	1.59004
60	1.79382	1.99549	2.47487	5.33928	1.53394	1.73464	11.01654	1.62816
61	1.83296	2.04714	2.53893	5.37403	1.59321	1.80167	11.44218	1.66628
62	1.87210	2.09879	2.60299	5.40878	1.65712	1.87394	11.90117	1.70440
63	1.91124	2.15044	2.66704	5.44354	1.72604	1.95188	12.39617	1.74253
64	1.95038	2.20209	2.73110	5.47829	1.80039	2.03595	12.93010	1.78065
65	1.98952	2.25373	2.79516	5.51304	1.88060	2.12666	13.50618	1.81877

Jefferson 2016 Time Period 1 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	5.21417	6.20387	7.16984	7.59995	1.07579	1.49948	4.43164	11.22904
4	3.82468	4.55230	5.26724	6.32503	1.02136	1.42362	4.20742	9.45300
5	3.06265	3.63933	4.21358	5.52122	0.97054	1.35278	3.99806	8.13758
6	2.58449	3.06318	3.54777	4.92912	0.92306	1.28660	3.80247	7.14470
7	2.25757	2.66756	3.09014	4.45605	0.87867	1.22473	3.61962	6.38232
8	2.04660	2.40786	2.78785	4.09635	0.83716	1.16687	3.44860	5.78772
9	1.88453	2.20762	2.55484	3.78106	0.79831	1.11271	3.28856	5.31730
10	1.75404	2.04613	2.36717	3.49913	0.76193	1.06201	3.13870	4.94018
11	1.64652	1.91282	2.21247	3.24595	0.72785	1.01451	2.99831	4.63409
12	1.55623	1.80064	2.08250	3.01783	0.69590	0.96998	2.86672	4.38269
13	1.47919	1.70472	1.97155	2.81172	0.66595	0.92823	2.74332	4.17385
14	1.41256	1.62158	1.87555	2.62505	0.63784	0.88905	2.62754	3.99838
15	1.35426	1.54866	1.79151	2.45560	0.61146	0.85228	2.51887	3.84927
16	1.30272	1.48404	1.71718	2.30151	0.58669	0.81775	2.41681	3.72112
17	1.25677	1.42626	1.65085	2.16111	0.56341	0.78531	2.32093	3.60968
18	1.21545	1.37418	1.59119	2.03296	0.54154	0.75482	2.23082	3.51162
19	1.17805	1.32689	1.53714	1.91581	0.52097	0.72615	2.14609	3.42432
20	1.13048	1.27283	1.47462	1.80995	0.50162	0.69919	2.06640	3.34568
21	1.08177	1.22216	1.41533	1.71508	0.48342	0.67382	1.99142	3.27407
22	1.03743	1.17606	1.36138	1.62824	0.46629	0.64994	1.92085	3.20817
23	0.99687	1.13392	1.31209	1.54866	0.45016	0.62746	1.85441	3.14697
24	0.95963	1.09526	1.26688	1.47565	0.43498	0.60629	1.79185	3.08965
25	0.92531	1.05965	1.22524	1.40859	0.42067	0.58635	1.73292	3.03562
26	0.89356	1.02675	1.18677	1.34694	0.40719	0.56757	1.67741	2.98442
27	0.86411	0.99625	1.15111	1.29021	0.39450	0.54987	1.62510	2.93573
28	0.83672	0.96789	1.11798	1.23795	0.38253	0.53319	1.57581	2.88931
29	0.81115	0.94146	1.08709	1.18979	0.37126	0.51747	1.52936	2.84503
30	0.78724	0.91676	1.05824	1.14535	0.36063	0.50266	1.48559	2.80280
31	0.76483	0.89363	1.03122	1.10433	0.35062	0.48870	1.44433	2.76258
32	0.74376	0.87191	1.00585	1.06643	0.34118	0.47555	1.40547	2.72437
33	0.72393	0.85148	0.98200	1.03141	0.33229	0.46316	1.36885	2.68821
34	0.70521	0.83222	0.95953	0.99904	0.32392	0.45149	1.33436	2.65411
35	0.68753	0.81404	0.93831	0.96909	0.31603	0.44050	1.30188	2.62215
36	0.67078	0.79685	0.91825	0.94138	0.30861	0.43016	1.27131	2.59235
37	0.65490	0.78055	0.89925	0.91574	0.30163	0.42043	1.24256	2.56475
38	0.63981	0.76510	0.88122	0.89203	0.29507	0.41128	1.21552	2.53939
39	0.62546	0.75041	0.86410	0.87009	0.28890	0.40269	1.19012	2.51627
40	0.61178	0.73643	0.84781	0.84981	0.28311	0.39462	1.16627	2.49538
41	0.59874	0.72311	0.83229	0.83107	0.27769	0.38705	1.14391	2.47671
42	0.58628	0.71040	0.81749	0.81376	0.27260	0.37996	1.12296	2.46020
43	0.57436	0.69827	0.80336	0.79780	0.26785	0.37334	1.10337	2.44571
44	0.56295	0.68666	0.78985	0.78311	0.26340	0.36715	1.08508	2.43319
45	0.55201	0.67555	0.77692	0.76960	0.25927	0.36138	1.06802	2.42245
46	0.54152	0.66490	0.76453	0.75720	0.25542	0.35601	1.05217	2.41328
47	0.53144	0.65469	0.75265	0.74587	0.25184	0.35103	1.03746	2.40543
48	0.52175	0.64485	0.74120	0.73552	0.24854	0.34643	1.02385	2.39856
49	0.52041	0.64339	0.73958	0.72597	0.24550	0.34219	1.01131	2.39856
50	0.51915	0.64202	0.73804	0.71741	0.24271	0.33829	0.99981	2.39856
51	0.51796	0.64073	0.73660	0.70980	0.24016	0.33474	0.98931	2.39856
52	0.51683	0.63952	0.73524	0.70309	0.23784	0.33152	0.97978	2.39856
53	0.51577	0.63837	0.73395	0.69725	0.23576	0.32861	0.97119	2.39856
54	0.51477	0.63728	0.73273	0.69226	0.23390	0.32602	0.96353	2.39856
55	0.51382	0.63625	0.73158	0.68809	0.23226	0.32373	0.95677	2.39856
56	0.52833	0.65061	0.74852	0.68472	0.23083	0.32174	0.95090	2.48609
57	0.54290	0.66503	0.76553	0.68213	0.22962	0.32005	0.94589	2.57362
58	0.55750	0.67949	0.78258	0.68032	0.22861	0.31864	0.94174	2.66115
59	0.57214	0.69400	0.79968	0.67928	0.22781	0.31753	0.93843	2.74868
60	0.58683	0.70854	0.81683	0.67900	0.22720	0.31669	0.93595	2.83621
61	0.60154	0.72313	0.83402	0.67949	0.22680	0.31613	0.93431	2.92374
62	0.61629	0.73775	0.85125	0.68074	0.22661	0.31585	0.93349	3.01128
63	0.63107	0.75240	0.86852	0.68277	0.22661	0.31585	0.93349	3.09881
64	0.64588	0.76709	0.88583	0.68559	0.22681	0.31613	0.93431	3.18634
65	0.66072	0.78180	0.90316	0.68921	0.22720	0.31669	0.93595	3.27387

Jefferson 2016 Time Period 1 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HOGV	LDDV	LDDT	HDDV	MC
3	51.31693	55.28531	63.46780	57.54317	4.36384	4.87988	34.76408	141.12282
4	40.28787	43.69579	50.16299	52.57471	4.02177	4.49736	32.03900	112.54855
5	33.67046	36.74210	42.18013	48.14102	3.71327	4.15238	29.58138	91.92468
6	29.25885	32.10632	36.85818	44.17834	3.43467	3.84084	27.36198	76.70595
7	26.10770	28.79501	33.05682	40.63116	3.18277	3.55915	25.35521	65.24667
8	23.74434	26.31155	30.20580	37.45105	2.95471	3.30412	23.53844	56.45689
9	21.90616	24.37997	27.98834	34.59590	2.74800	3.07296	21.89165	49.59872
10	20.43564	22.83472	26.21436	32.02876	2.56040	2.86318	20.39714	44.16197
11	19.23247	21.57040	24.76291	29.71747	2.38995	2.67257	19.03931	39.78738
12	18.22984	20.51682	23.55339	27.63371	2.23491	2.49920	17.80423	36.21713
13	17.38145	19.62532	22.52997	25.75262	2.09374	2.34134	16.67960	33.26337
14	16.65428	18.86119	21.65273	24.05240	1.96506	2.19744	15.65448	30.78711
15	16.02405	18.19893	20.89244	22.51399	1.84765	2.06614	14.71910	28.68407
16	15.47261	17.61946	20.22722	21.12032	1.74041	1.94622	13.86485	26.87523
17	14.98603	17.10815	19.64024	19.85660	1.64239	1.83661	13.08396	25.30002
18	14.55353	16.65367	19.11850	18.70959	1.55271	1.73633	12.36955	23.91170
19	14.16654	16.24702	18.65164	17.66766	1.47060	1.64451	11.71542	22.67389
20	13.56952	15.63041	17.94377	16.72054	1.39537	1.56038	11.11613	21.55827
21	12.79711	14.80218	16.99297	15.85901	1.32641	1.48326	10.56669	20.54276
22	12.09492	14.04924	16.12859	15.07499	1.26314	1.41251	10.06271	19.61012
23	11.45378	13.36178	15.33939	14.36130	1.20509	1.34760	9.60023	18.74692
24	10.86609	12.73160	14.61594	13.71153	1.15180	1.28800	9.17568	17.94281
25	10.32540	12.15183	13.95037	13.12000	1.10287	1.23329	8.78588	17.19000
26	9.82630	11.61666	13.33599	12.58163	1.05794	1.18305	8.42798	16.48238
27	9.36417	11.12114	12.76713	12.09193	1.01669	1.13692	8.09937	15.81548
28	8.93506	10.66101	12.23889	11.64687	0.97883	1.09458	7.79776	15.18591
29	8.53553	10.23261	11.74709	11.26291	0.94410	1.05574	7.52106	14.59137
30	8.16264	9.83277	11.28807	10.87686	0.91225	1.02013	7.26739	14.03015
31	7.81381	9.45873	10.85867	10.54589	0.88309	0.98752	7.03506	13.50086
32	7.48678	9.10806	10.45611	10.24753	0.85642	0.95769	6.82257	13.00256
33	7.17957	8.77865	10.07794	9.97954	0.83206	0.93046	6.62856	12.53484
34	6.89044	8.46862	9.72202	9.73996	0.80987	0.90565	6.45178	12.09674
35	6.61782	8.17630	9.38643	9.52707	0.78971	0.88310	6.29116	11.68809
36	6.36035	7.90022	9.06949	9.33935	0.77146	0.86268	6.14572	11.30793
37	6.11680	7.63906	8.76968	9.17550	0.75499	0.84427	6.01458	10.95613
38	5.88606	7.39165	8.48566	9.03438	0.74023	0.82776	5.89695	10.63157
39	5.66716	7.15693	8.21619	8.91501	0.72707	0.81305	5.79216	10.33353
40	5.45920	6.93394	7.96020	8.81660	0.71546	0.80006	5.69960	10.06108
41	5.26139	6.72183	7.71670	8.73848	0.70530	0.78871	5.61873	9.81312
42	5.07300	6.51983	7.48480	8.68013	0.69656	0.77894	5.54910	9.58808
43	4.89336	6.32721	7.26367	8.64116	0.68918	0.77068	5.49032	9.38459
44	4.72190	6.14335	7.05260	8.62130	0.68313	0.76391	5.44205	9.20059
45	4.55805	5.96767	6.85091	8.62045	0.67835	0.75857	5.40404	9.03419
46	4.40133	5.79962	6.65799	8.63857	0.67484	0.75465	5.37606	8.88296
47	4.25128	5.63872	6.47328	8.67579	0.67257	0.75211	5.35797	8.74395
48	4.10748	5.48453	6.29627	8.73237	0.67153	0.75094	5.34967	8.61423
49	4.10748	5.48453	6.29627	8.80867	0.67171	0.75114	5.35112	8.61423
50	4.10748	5.48453	6.29627	8.90521	0.67312	0.75272	5.36231	8.61423
51	4.10748	5.48453	6.29627	9.02263	0.67575	0.75566	5.38332	8.61423
52	4.10748	5.48453	6.29627	9.16175	0.67964	0.76001	5.41426	8.61423
53	4.10748	5.48453	6.29627	9.32348	0.68479	0.76577	5.45529	8.61423
54	4.10748	5.48453	6.29627	9.50898	0.69123	0.77298	5.50665	8.61423
55	4.10748	5.48453	6.29627	9.71952	0.69901	0.78167	5.56861	8.61423
56	4.48357	5.92752	6.80482	9.95661	0.70817	0.79191	5.64154	10.68878
57	4.85966	6.37051	7.31338	10.22194	0.71875	0.80374	5.72582	12.76334
58	5.23576	6.81350	7.82193	10.51745	0.73081	0.81724	5.82195	14.83790
59	5.61185	7.25649	8.33049	10.84535	0.74444	0.83247	5.93048	16.91245
60	5.98794	7.69948	8.83904	11.20809	0.75970	0.84953	6.05204	18.98700
61	6.36403	8.14247	9.34760	11.60849	0.77668	0.86853	6.18734	21.06155
62	6.74012	8.58546	9.85615	12.04966	0.79549	0.88956	6.33719	23.13611
63	7.11622	9.02845	10.36471	12.53515	0.81624	0.91276	6.50249	25.21066
64	7.49231	9.47144	10.87326	13.06892	0.83906	0.93828	6.68426	27.28520
65	7.86840	9.91443	11.38182	13.65538	0.86408	0.96626	6.88363	29.35976

Jefferson 2016 Time Period 1 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	1.62929	1.84964	2.25655	3.06217	1.82963	2.08625	11.26420	0.91266
4	1.48922	1.69062	2.06255	3.09385	1.75257	1.99839	10.78978	0.87295
5	1.40518	1.59521	1.94615	3.12554	1.68114	1.91694	10.35003	0.83999
6	1.34915	1.53161	1.86855	3.15723	1.61491	1.84143	9.94231	0.81327
7	1.30913	1.48617	1.81313	3.18892	1.55350	1.77140	9.56422	0.79230
8	1.27911	1.45210	1.77155	3.22060	1.49655	1.70646	9.21359	0.77658
9	1.25577	1.42560	1.73922	3.25229	1.44373	1.64623	8.88842	0.76565
10	1.23709	1.40439	1.71336	3.28398	1.39476	1.59039	8.58691	0.75908
11	1.22181	1.38705	1.69219	3.31567	1.34936	1.53863	8.30742	0.75643
12	1.20908	1.37259	1.67455	3.34735	1.30730	1.49066	8.04845	0.75729
13	1.19830	1.36036	1.65963	3.37904	1.26834	1.44624	7.80863	0.76127
14	1.18907	1.34988	1.64684	3.41073	1.23230	1.40514	7.58672	0.76800
15	1.18106	1.34079	1.63576	3.44242	1.19898	1.36715	7.38159	0.77713
16	1.17406	1.33284	1.62606	3.47410	1.16822	1.33208	7.19222	0.78832
17	1.16788	1.32582	1.61750	3.50579	1.13987	1.29975	7.01765	0.80125
18	1.16239	1.31959	1.60989	3.53748	1.11378	1.27000	6.85706	0.81563
19	1.15747	1.31401	1.60308	3.56917	1.08984	1.24270	6.70966	0.83116
20	1.16021	1.30532	1.59248	3.60086	1.06793	1.21772	6.57476	0.84759
21	1.16763	1.30682	1.59431	3.63254	1.04795	1.19493	6.45174	0.86467
22	1.17438	1.30818	1.59597	3.66423	1.02980	1.17424	6.34000	0.88217
23	1.18054	1.30942	1.59749	3.69592	1.01340	1.15554	6.23906	0.89989
24	1.18618	1.31056	1.59888	3.72760	0.99868	1.13876	6.14845	0.91764
25	1.19138	1.31161	1.60015	3.75929	0.98558	1.12382	6.06776	0.93524
26	1.19617	1.31258	1.60134	3.79098	0.97403	1.11064	5.99664	0.95253
27	1.20061	1.31347	1.60243	3.82267	0.96398	1.09919	5.93478	0.96939
28	1.20474	1.31430	1.60345	3.85435	0.95539	1.08939	5.88189	0.98569
29	1.20858	1.31508	1.60439	3.88604	0.94822	1.08122	5.83778	1.00134
30	1.21216	1.31580	1.60527	3.91773	0.94244	1.07463	5.80221	1.01624
31	1.21551	1.31648	1.60610	3.94942	0.93804	1.06960	5.77506	1.03035
32	1.21865	1.31711	1.60687	3.98110	0.93497	1.06611	5.75621	1.04361
33	1.22160	1.31771	1.60760	4.01279	0.93324	1.06414	5.74557	1.05600
34	1.22438	1.31827	1.60828	4.04448	0.93284	1.06369	5.74310	1.06751
35	1.22700	1.31880	1.60893	4.07617	0.93377	1.06474	5.74879	1.07814
36	1.22947	1.31930	1.60954	4.10785	0.93602	1.06731	5.76266	1.08793
37	1.23182	1.31977	1.61011	4.13954	0.93961	1.07140	5.78478	1.09692
38	1.23403	1.32022	1.61066	4.17123	0.94456	1.07704	5.81522	1.10517
39	1.23613	1.32064	1.61118	4.20292	0.95088	1.08425	5.85414	1.11277
40	1.23813	1.32104	1.61167	4.23461	0.95860	1.09306	5.90170	1.11981
41	1.24003	1.32143	1.61214	4.26629	0.96776	1.10350	5.95808	1.12642
42	1.24184	1.32179	1.61258	4.29798	0.97840	1.11563	6.02356	1.13274
43	1.24357	1.32214	1.61301	4.32967	0.99056	1.12949	6.09842	1.13891
44	1.24522	1.32247	1.61341	4.36135	1.00429	1.14515	6.18297	1.14511
45	1.24679	1.32279	1.61380	4.39304	1.01966	1.16268	6.27761	1.15153
46	1.24830	1.32310	1.61417	4.42473	1.03674	1.18216	6.38275	1.15838
47	1.24974	1.32339	1.61453	4.45642	1.05560	1.20366	6.49888	1.16589
48	1.25112	1.32367	1.61487	4.48811	1.07633	1.22730	6.62651	1.17430
49	1.28693	1.37274	1.67474	4.51979	1.09903	1.25319	6.76627	1.21254
50	1.32273	1.42182	1.73461	4.55148	1.12381	1.28144	6.91878	1.25078
51	1.35854	1.47089	1.79448	4.58317	1.15077	1.31218	7.08478	1.28901
52	1.39435	1.51997	1.85436	4.61486	1.18005	1.34557	7.26508	1.32725
53	1.43016	1.56904	1.91423	4.64654	1.21181	1.38178	7.46055	1.36549
54	1.46597	1.61812	1.97410	4.67823	1.24618	1.42097	7.67216	1.40373
55	1.50178	1.66720	2.03397	4.70992	1.28335	1.46335	7.90101	1.44196
56	1.53759	1.71627	2.09385	4.74160	1.32350	1.50914	8.14822	1.48020
57	1.57339	1.76535	2.15372	4.77329	1.36685	1.55857	8.41512	1.51844
58	1.60920	1.81442	2.21359	4.80498	1.41363	1.61191	8.70310	1.55668
59	1.64501	1.86350	2.27346	4.83667	1.46409	1.66944	9.01373	1.59492
60	1.68082	1.91257	2.33333	4.86836	1.51850	1.73148	9.34873	1.63315
61	1.71663	1.96165	2.39321	4.90005	1.57717	1.79839	9.70993	1.67139
62	1.75244	2.01073	2.45308	4.93173	1.64044	1.87053	10.09943	1.70963
63	1.78825	2.05980	2.51295	4.96342	1.70866	1.94832	10.51949	1.74787
64	1.82405	2.10888	2.57282	4.99511	1.78226	2.03224	10.97258	1.78611
65	1.85986	2.15795	2.63270	5.02679	1.86166	2.12279	11.46145	1.82434

Jefferson 2016 Time Period 2 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	6.13210	7.03439	8.10059	9.05899	1.07579	1.49948	4.43164	12.46567
4	4.37868	5.02802	5.79822	7.25916	1.02136	1.42362	4.20742	10.71000
5	3.44304	3.95130	4.55998	6.20665	0.97054	1.35278	3.99806	9.40967
6	2.86777	3.28643	3.79413	5.47626	0.92306	1.28660	3.80247	8.42819
7	2.48062	2.83746	3.27633	4.91783	0.87867	1.22473	3.61962	7.67456
8	2.24634	2.55791	2.95157	4.52490	0.83716	1.16687	3.44860	7.08678
9	2.06713	2.34405	2.70312	4.18541	0.79831	1.11271	3.28856	6.62176
10	1.92214	2.17182	2.50325	3.88323	0.76193	1.06201	3.13870	6.24896
11	1.80203	2.02987	2.33871	3.61268	0.72785	1.01451	2.99831	5.94638
12	1.70057	1.91063	2.20066	3.36938	0.69590	0.96998	2.86672	5.69786
13	1.61348	1.80885	2.08300	3.14976	0.66595	0.92823	2.74332	5.49142
14	1.53765	1.72080	1.98136	2.95089	0.63784	0.88905	2.62754	5.31796
15	1.47085	1.64373	1.89253	2.77032	0.61146	0.85228	2.51887	5.17057
16	1.41138	1.57558	1.81410	2.60596	0.58669	0.81775	2.41681	5.04389
17	1.35795	1.51478	1.74425	2.45600	0.56341	0.78531	2.32093	4.93372
18	1.30955	1.46010	1.68155	2.31890	0.54154	0.75482	2.23082	4.83678
19	1.26538	1.41057	1.62486	2.19330	0.52097	0.72615	2.14609	4.75049
20	1.21273	1.35420	1.55967	2.08087	0.50162	0.69919	2.06640	4.67276
21	1.16131	1.30092	1.49747	1.98199	0.48342	0.67382	1.99142	4.60197
22	1.11444	1.25243	1.44086	1.89146	0.46629	0.64994	1.92085	4.53682
23	1.07154	1.20811	1.38913	1.80847	0.45016	0.62746	1.85441	4.47632
24	1.03212	1.16742	1.34166	1.73229	0.43498	0.60629	1.79185	4.41965
25	0.99574	1.12995	1.29794	1.66227	0.42067	0.58635	1.73292	4.36625
26	0.96208	1.09531	1.25753	1.59786	0.40719	0.56757	1.67741	4.31564
27	0.93081	1.06319	1.22008	1.53853	0.39450	0.54987	1.62510	4.26750
28	0.90169	1.03332	1.18526	1.48383	0.38253	0.53319	1.57581	4.22162
29	0.87449	1.00548	1.15280	1.43336	0.37126	0.51747	1.52936	4.17785
30	0.84902	0.97945	1.12247	1.38674	0.36063	0.50266	1.48559	4.13610
31	0.82511	0.95506	1.09406	1.34364	0.35062	0.48870	1.44433	4.09634
32	0.80262	0.93215	1.06738	1.30377	0.34118	0.47555	1.40547	4.05857
33	0.78142	0.91060	1.04229	1.26687	0.33229	0.46316	1.36885	4.02282
34	0.76139	0.89028	1.01864	1.23269	0.32392	0.45149	1.33436	3.98912
35	0.74244	0.87109	0.99631	1.20102	0.31603	0.44050	1.30188	3.95752
36	0.72447	0.85293	0.97518	1.17166	0.30861	0.43016	1.27131	3.92807
37	0.70740	0.83572	0.95517	1.14444	0.30163	0.42043	1.24256	3.90079
38	0.69117	0.81938	0.93618	1.11919	0.29507	0.41128	1.21552	3.87571
39	0.67571	0.80385	0.91813	1.09578	0.28890	0.40269	1.19012	3.85286
40	0.66095	0.78907	0.90095	1.07407	0.28311	0.39462	1.16627	3.83220
41	0.64686	0.77498	0.88459	1.05395	0.27769	0.38705	1.14391	3.81376
42	0.63338	0.76153	0.86897	1.03531	0.27260	0.37996	1.12296	3.79743
43	0.62047	0.74868	0.85406	1.01806	0.26785	0.37334	1.10337	3.78311
44	0.60808	0.73638	0.83980	1.00210	0.26340	0.36715	1.08508	3.77073
45	0.59620	0.72461	0.82614	0.98737	0.25927	0.36138	1.06802	3.76011
46	0.58477	0.71332	0.81305	0.97380	0.25542	0.35601	1.05217	3.75105
47	0.57378	0.70249	0.80050	0.96131	0.25184	0.35103	1.03746	3.74329
48	0.56321	0.69201	0.78836	0.94982	0.24854	0.34643	1.02385	3.73650
49	0.56107	0.68968	0.78575	0.93906	0.24550	0.34219	1.01131	3.73650
50	0.55905	0.68749	0.78329	0.92937	0.24271	0.33829	0.99981	3.73650
51	0.55715	0.68542	0.78097	0.92069	0.24016	0.33474	0.98931	3.73650
52	0.55536	0.68347	0.77878	0.91298	0.23784	0.33152	0.97978	3.73650
53	0.55367	0.68162	0.77671	0.90620	0.23576	0.32861	0.97119	3.73650
54	0.55207	0.67988	0.77476	0.90031	0.23390	0.32602	0.96353	3.73650
55	0.55055	0.67823	0.77291	0.89530	0.23226	0.32373	0.95677	3.73650
56	0.54843	0.67620	0.77099	0.89113	0.23083	0.32174	0.95090	3.82302
57	0.54658	0.67457	0.76913	0.88779	0.22962	0.32005	0.94589	3.90955
58	0.54481	0.67299	0.76727	0.88527	0.22861	0.31864	0.94174	3.99607
59	0.54311	0.67144	0.76541	0.88355	0.22781	0.31753	0.93843	4.08260
60	0.54144	0.66991	0.76355	0.88263	0.22720	0.31669	0.93595	4.16913
61	0.53981	0.66841	0.76169	0.88250	0.22680	0.31613	0.93431	4.25566
62	0.53821	0.66691	0.75983	0.88318	0.22661	0.31585	0.93349	4.34218
63	0.53661	0.66541	0.75797	0.88466	0.22661	0.31585	0.93349	4.42871
64	0.53501	0.66391	0.75611	0.88695	0.22681	0.31613	0.93431	4.51524
65	0.53341	0.66241	0.75425	0.89008	0.22720	0.31669	0.93595	4.60176

Jefferson 2016 Time Period 2 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	51.31693	55.28531	63.46780	57.54317	4.36384	4.87988	34.76408	171.91000
4	40.28787	43.69579	50.16299	52.57471	4.02177	4.49736	32.03900	137.10197
5	33.67046	36.74210	42.18013	48.14102	3.71327	4.15238	29.58138	111.97885
6	29.25885	32.10632	36.85818	44.17834	3.43467	3.84084	27.36198	93.44003
7	26.10770	28.79501	33.05682	40.63116	3.18277	3.55915	25.35521	79.48079
8	23.74434	26.31155	30.20580	37.45105	2.95471	3.30412	23.53844	68.77339
9	21.90616	24.37997	27.98834	34.59590	2.74800	3.07296	21.89165	60.41910
10	20.43564	22.83472	26.21436	32.02876	2.56040	2.86318	20.39714	53.79630
11	19.23247	21.57040	24.76291	29.71747	2.38995	2.67257	19.03931	48.46732
12	18.22984	20.51682	23.55339	27.63371	2.23491	2.49920	17.80423	44.11821
13	17.38145	19.62532	22.52997	25.75262	2.09374	2.34134	16.67960	40.52007
14	16.65428	18.86119	21.65273	24.05240	1.96506	2.19744	15.65448	37.50356
15	16.02405	18.19893	20.89244	22.51399	1.84765	2.06614	14.71910	34.94174
16	15.47261	17.61946	20.22722	21.12032	1.74041	1.94622	13.86485	32.73830
17	14.98603	17.10815	19.64024	19.85660	1.64239	1.83661	13.08396	30.81944
18	14.55353	16.65367	19.11850	18.70959	1.55271	1.73633	12.36955	29.12823
19	14.16654	16.24702	18.65164	17.66766	1.47060	1.64451	11.71542	27.62036
20	13.56952	15.63041	17.94377	16.72054	1.39537	1.56038	11.11613	26.26138
21	12.79711	14.80218	16.99297	15.85901	1.32641	1.48326	10.56669	25.02432
22	12.09492	14.04924	16.12859	15.07499	1.26314	1.41251	10.06271	23.88823
23	11.45378	13.36178	15.33939	14.36130	1.20509	1.34760	9.60023	22.83672
24	10.86609	12.73160	14.61594	13.71153	1.15180	1.28800	9.17568	21.85719
25	10.32540	12.15183	13.95037	13.12000	1.10287	1.23329	8.78588	20.94014
26	9.82630	11.61666	13.33599	12.58163	1.05794	1.18305	8.42798	20.07813
27	9.36417	11.12114	12.76713	12.09193	1.01669	1.13692	8.09937	19.26575
28	8.93506	10.66101	12.23889	11.64687	0.97883	1.09458	7.79776	18.49884
29	8.53553	10.23261	11.74709	11.24291	0.94410	1.05574	7.52106	17.77460
30	8.16264	9.83277	11.28807	10.87686	0.91225	1.02013	7.26739	17.09094
31	7.81381	9.45873	10.85867	10.54589	0.88309	0.98752	7.03506	16.44618
32	7.48678	9.10806	10.45611	10.24753	0.85642	0.95769	6.82257	15.83918
33	7.17957	8.77865	10.07794	9.97954	0.83206	0.93046	6.62856	15.26942
34	6.89044	8.46862	9.72202	9.73996	0.80987	0.90565	6.45178	14.73575
35	6.61782	8.17630	9.38643	9.52707	0.78971	0.88310	6.29116	14.23794
36	6.36035	7.90022	9.06949	9.33935	0.77146	0.86268	6.14572	13.77485
37	6.11680	7.63906	8.76968	9.17550	0.75499	0.84427	6.01458	13.34630
38	5.88606	7.39165	8.48566	9.03438	0.74023	0.82776	5.89695	12.95093
39	5.66716	7.15693	8.21619	8.91501	0.72707	0.81305	5.79216	12.58787
40	5.45920	6.93394	7.96020	8.81660	0.71546	0.80006	5.69960	12.25599
41	5.26139	6.72183	7.71670	8.73848	0.70530	0.78871	5.61873	11.95393
42	5.07300	6.51983	7.48480	8.68013	0.69656	0.77894	5.54910	11.67980
43	4.89336	6.32721	7.26367	8.64116	0.68918	0.77068	5.49032	11.43192
44	4.72190	6.14335	7.05260	8.62130	0.68313	0.76391	5.44205	11.20778
45	4.55805	5.96767	6.85091	8.62045	0.67835	0.75857	5.40404	11.00507
46	4.40133	5.79962	6.65799	8.63857	0.67484	0.75465	5.37606	10.82086
47	4.25128	5.63872	6.47328	8.67579	0.67257	0.75211	5.35797	10.65152
48	4.10748	5.48453	6.29627	8.73237	0.67153	0.75094	5.34967	10.49350
49	4.10748	5.48453	6.29627	8.80867	0.67171	0.75114	5.35112	10.49350
50	4.10748	5.48453	6.29627	8.90521	0.67312	0.75272	5.36231	10.49350
51	4.10748	5.48453	6.29627	9.02263	0.67575	0.75566	5.38332	10.49350
52	4.10748	5.48453	6.29627	9.16175	0.67964	0.76001	5.41426	10.49350
53	4.10748	5.48453	6.29627	9.32348	0.68479	0.76577	5.45529	10.49350
54	4.10748	5.48453	6.29627	9.50898	0.69123	0.77298	5.50665	10.49350
55	4.10748	5.48453	6.29627	9.71952	0.69901	0.78167	5.56861	10.49350
56	4.48357	5.92752	6.80482	9.95661	0.70817	0.79191	5.64154	13.02063
57	4.85966	6.37051	7.31338	10.22194	0.71875	0.80374	5.72582	15.54778
58	5.23576	6.81350	7.82193	10.51745	0.73081	0.81724	5.82195	18.07489
59	5.61185	7.25649	8.33049	10.84535	0.74444	0.83247	5.93048	20.60204
60	5.98794	7.69948	8.83904	11.20809	0.75970	0.84953	6.05204	23.12917
61	6.36403	8.14247	9.34760	11.60849	0.77668	0.86853	6.18734	25.65631
62	6.74012	8.58546	9.85615	12.04966	0.79549	0.88956	6.33719	28.18341
63	7.11622	9.02845	10.36471	12.53515	0.81624	0.91276	6.50249	30.71059
64	7.49231	9.47144	10.87326	13.06892	0.83906	0.93828	6.68426	33.23772
65	7.86840	9.91443	11.38182	13.65538	0.86408	0.96626	6.88363	35.76485

Jefferson 2016 Time Period 2 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	1.65471	1.87873	2.29229	3.11201	1.82963	2.08625	11.26420	0.82775
4	1.51246	1.71722	2.09522	3.14422	1.75257	1.99839	10.78978	0.79173
5	1.42710	1.62031	1.97698	3.17642	1.68114	1.91694	10.35003	0.76184
6	1.37020	1.55570	1.89815	3.20862	1.61491	1.84143	9.94231	0.73761
7	1.32955	1.50955	1.84184	3.24083	1.55350	1.77140	9.56422	0.71858
8	1.29907	1.47494	1.79961	3.27303	1.49655	1.70646	9.21359	0.70432
9	1.27536	1.44802	1.76677	3.30523	1.44373	1.64623	8.88842	0.69442
10	1.25639	1.42649	1.74049	3.33744	1.39476	1.59039	8.58691	0.68845
11	1.24087	1.40887	1.71899	3.36964	1.34936	1.53863	8.30742	0.68605
12	1.22794	1.39418	1.70108	3.40184	1.30730	1.49066	8.04845	0.68683
13	1.21700	1.38176	1.68592	3.43405	1.26834	1.44624	7.80863	0.69044
14	1.20762	1.37111	1.67293	3.46625	1.23230	1.40514	7.58672	0.69655
15	1.19949	1.36188	1.66166	3.49845	1.19898	1.36715	7.38159	0.70483
16	1.19238	1.35381	1.65181	3.53066	1.16822	1.33208	7.19222	0.71498
17	1.18610	1.34668	1.64312	3.56286	1.13987	1.29975	7.01765	0.72671
18	1.18052	1.34035	1.63539	3.59506	1.11378	1.27000	6.85706	0.73974
19	1.17553	1.33468	1.62847	3.62727	1.08984	1.24270	6.70966	0.75383
20	1.17831	1.32585	1.61770	3.65947	1.06793	1.21772	6.57476	0.76873
21	1.18585	1.32737	1.61956	3.69167	1.04795	1.19493	6.45174	0.78422
22	1.19270	1.32876	1.62125	3.72388	1.02980	1.17424	6.34000	0.80010
23	1.19895	1.33002	1.62279	3.75608	1.01340	1.15554	6.23906	0.81617
24	1.20469	1.33118	1.62420	3.78828	0.99868	1.13876	6.14845	0.83226
25	1.20996	1.33224	1.62550	3.82049	0.98558	1.12382	6.06776	0.84822
26	1.21484	1.33322	1.62670	3.85269	0.97403	1.11064	5.99664	0.86391
27	1.21934	1.33413	1.62781	3.88490	0.96398	1.09919	5.93478	0.87920
28	1.22353	1.33498	1.62884	3.91709	0.95539	1.08939	5.88189	0.89398
29	1.22743	1.33577	1.62980	3.94930	0.94822	1.08122	5.83778	0.90817
30	1.23107	1.33650	1.63070	3.98150	0.94244	1.07463	5.80221	0.92169
31	1.23447	1.33719	1.63153	4.01371	0.93804	1.06960	5.77506	0.93449
32	1.23766	1.33783	1.63232	4.04591	0.93497	1.06611	5.75621	0.94652
33	1.24066	1.33844	1.63306	4.07811	0.93324	1.06414	5.74557	0.95775
34	1.24348	1.33901	1.63375	4.11032	0.93284	1.06369	5.74310	0.96819
35	1.24614	1.33954	1.63441	4.14252	0.93377	1.06474	5.74879	0.97783
36	1.24865	1.34005	1.63503	4.17472	0.93602	1.06731	5.76266	0.98671
37	1.25103	1.34053	1.63561	4.20693	0.93961	1.07140	5.78478	0.99486
38	1.25328	1.34098	1.63617	4.23913	0.94456	1.07704	5.81522	1.00234
39	1.25542	1.34142	1.63669	4.27133	0.95088	1.08425	5.85414	1.00924
40	1.25745	1.34182	1.63719	4.30354	0.95860	1.09306	5.90170	1.01563
41	1.25938	1.34222	1.63767	4.33574	0.96776	1.10350	5.95808	1.02162
42	1.26122	1.34259	1.63812	4.36794	0.97840	1.11563	6.02356	1.02735
43	1.26297	1.34294	1.63855	4.40015	0.99056	1.12949	6.09842	1.03294
44	1.26464	1.34328	1.63897	4.43235	1.00429	1.14515	6.18297	1.03857
45	1.26624	1.34360	1.63936	4.46455	1.01966	1.16268	6.27761	1.04439
46	1.26777	1.34391	1.63974	4.49676	1.03674	1.18216	6.38275	1.05060
47	1.26923	1.34420	1.64010	4.52896	1.05560	1.20366	6.49888	1.05741
48	1.27064	1.34449	1.64044	4.56117	1.07633	1.22730	6.62651	1.06504
49	1.30701	1.39433	1.70126	4.59337	1.09903	1.25319	6.76627	1.09972
50	1.34337	1.44418	1.76208	4.62557	1.12381	1.28144	6.91878	1.13440
51	1.37974	1.49403	1.82290	4.65777	1.15077	1.31218	7.08478	1.16908
52	1.41611	1.54388	1.88373	4.68998	1.18005	1.34557	7.26508	1.20376
53	1.45247	1.59373	1.94454	4.72218	1.21181	1.38178	7.46055	1.23845
54	1.48884	1.64357	2.00537	4.75438	1.24618	1.42097	7.67216	1.27312
55	1.52521	1.69342	2.06619	4.78659	1.28335	1.46335	7.90101	1.30781
56	1.56157	1.74327	2.12701	4.81879	1.32350	1.50914	8.14822	1.34249
57	1.59794	1.79312	2.18783	4.85100	1.36685	1.55857	8.41512	1.37717
58	1.63431	1.84297	2.24865	4.88320	1.41363	1.61191	8.70310	1.41185
59	1.67067	1.89281	2.30947	4.91540	1.46409	1.66944	9.01373	1.44653
60	1.70704	1.94266	2.37029	4.94761	1.51850	1.73148	9.34873	1.48121
61	1.74341	1.99251	2.43111	4.97981	1.57717	1.79839	9.70993	1.51589
62	1.77978	2.04236	2.49193	5.01201	1.64044	1.87053	10.09943	1.55057
63	1.81614	2.09221	2.55275	5.04422	1.70866	1.94832	10.51949	1.58525
64	1.85251	2.14206	2.61357	5.07642	1.78226	2.03224	10.97258	1.61993
65	1.88888	2.19190	2.67439	5.10862	1.86166	2.12279	11.46145	1.65461

Jefferson 2016 Time Period 3 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	6.34931	7.23117	8.32162	9.41307	1.07579	1.49948	4.43164	12.61561
4	4.50879	5.13966	5.92335	7.48526	1.02136	1.42362	4.20742	10.86137
5	3.53158	4.02359	4.64080	6.37110	0.97054	1.35278	3.99806	9.56210
6	2.93306	3.33740	3.85092	5.60568	0.92306	1.28660	3.80247	8.58141
7	2.53150	2.87559	3.31865	5.02509	0.87867	1.22473	3.61962	7.82839
8	2.29159	2.59129	2.98853	4.62260	0.83716	1.16687	3.44860	7.24109
9	2.10825	2.37419	2.73639	4.27586	0.79831	1.11271	3.28856	6.77645
10	1.95975	2.19940	2.53361	3.96751	0.76193	1.06201	3.13870	6.40395
11	1.83657	2.05540	2.36672	3.69162	0.72785	1.01451	2.99831	6.10162
12	1.73241	1.93447	2.22676	3.44359	0.69590	0.96998	2.86672	5.85330
13	1.64286	1.83131	2.10750	3.21975	0.66595	0.92823	2.74332	5.64703
14	1.56479	1.74210	2.00452	3.01706	0.63784	0.88905	2.62754	5.47371
15	1.49591	1.66404	1.91455	2.83301	0.61146	0.85228	2.51887	5.32644
16	1.43450	1.59506	1.83516	2.66544	0.58669	0.81775	2.41681	5.19986
17	1.37924	1.53354	1.76448	2.51250	0.56341	0.78531	2.32093	5.08978
18	1.32909	1.47826	1.70106	2.37263	0.54154	0.75482	2.23082	4.99293
19	1.28327	1.42821	1.64375	2.24443	0.52097	0.72615	2.14609	4.90670
20	1.22938	1.37128	1.57792	2.12991	0.50162	0.69919	2.06640	4.82903
21	1.17732	1.31735	1.51500	2.02964	0.48342	0.67382	1.99142	4.75830
22	1.12987	1.26827	1.45773	1.93784	0.46629	0.64994	1.92085	4.69321
23	1.08642	1.22340	1.40539	1.85367	0.45016	0.62746	1.85441	4.63275
24	1.04649	1.18221	1.35736	1.77640	0.43498	0.60629	1.79185	4.57613
25	1.00964	1.14426	1.31312	1.70538	0.42067	0.58635	1.73292	4.52277
26	0.97553	1.10918	1.27223	1.64003	0.40719	0.56757	1.67741	4.47220
27	0.94384	1.07665	1.23432	1.57983	0.39450	0.54987	1.62510	4.42411
28	0.91432	1.04640	1.19908	1.52432	0.38253	0.53319	1.57581	4.37826
29	0.88674	1.01819	1.16622	1.47308	0.37126	0.51747	1.52936	4.33453
30	0.86092	0.99182	1.13551	1.42574	0.36063	0.50266	1.48559	4.29281
31	0.83667	0.96710	1.10674	1.38198	0.35062	0.48870	1.44433	4.25308
32	0.81385	0.94389	1.07973	1.34148	0.34118	0.47555	1.40547	4.21534
33	0.79234	0.92205	1.05432	1.30398	0.33229	0.46316	1.36885	4.17963
34	0.77201	0.90145	1.03036	1.26923	0.32392	0.45149	1.33436	4.14595
35	0.75277	0.88199	1.00774	1.23703	0.31603	0.44050	1.30188	4.11438
36	0.73452	0.86358	0.98634	1.20716	0.30861	0.43016	1.27131	4.08495
37	0.71719	0.84612	0.96606	1.17945	0.30163	0.42043	1.24256	4.05769
38	0.70069	0.82955	0.94681	1.15375	0.29507	0.41128	1.21552	4.03263
39	0.68498	0.81380	0.92852	1.12990	0.28890	0.40269	1.19012	4.00980
40	0.66998	0.79880	0.91111	1.10777	0.28311	0.39462	1.16627	3.98916
41	0.65565	0.78450	0.89452	1.08726	0.27769	0.38705	1.14391	3.97073
42	0.64194	0.77085	0.87869	1.06824	0.27260	0.37996	1.12296	3.95441
43	0.62881	0.75781	0.86356	1.05062	0.26785	0.37334	1.10337	3.94011
44	0.61621	0.74532	0.84910	1.03432	0.26340	0.36715	1.08508	3.92774
45	0.60411	0.73337	0.83525	1.01925	0.25927	0.36138	1.06802	3.91713
46	0.59248	0.72190	0.82197	1.00535	0.25542	0.35601	1.05217	3.90808
47	0.58128	0.71090	0.80923	0.99255	0.25184	0.35103	1.03746	3.90032
48	0.57051	0.70025	0.79691	0.98076	0.24854	0.34643	1.02385	3.89353
49	0.56818	0.69771	0.79406	0.96968	0.24550	0.34219	1.01131	3.89353
50	0.56598	0.69532	0.79137	0.95969	0.24271	0.33829	0.99981	3.89353
51	0.56391	0.69307	0.78885	0.95072	0.24016	0.33474	0.98931	3.89353
52	0.56196	0.69094	0.78646	0.94275	0.23784	0.33152	0.97978	3.89353
53	0.56012	0.68893	0.78421	0.93572	0.23576	0.32861	0.97119	3.89353
54	0.55838	0.68704	0.78208	0.92961	0.23390	0.32602	0.96353	3.89353
55	0.55673	0.68524	0.78007	0.92438	0.23226	0.32373	0.95677	3.89353
56	0.55058	0.68888	0.79620	0.92001	0.23083	0.32174	0.95090	3.97999
57	0.58452	0.71261	0.81242	0.91648	0.22962	0.32005	0.94589	4.06644
58	0.59852	0.72641	0.82874	0.91379	0.22861	0.31864	0.94174	4.15290
59	0.61260	0.74030	0.84515	0.91191	0.22781	0.31753	0.93843	4.23936
60	0.62675	0.75426	0.86164	0.91084	0.22720	0.31669	0.93595	4.32581
61	0.64095	0.76828	0.87820	0.91057	0.22680	0.31613	0.93431	4.41227
62	0.65522	0.78237	0.89483	0.91112	0.22661	0.31585	0.93349	4.49873
63	0.66953	0.79651	0.91152	0.91249	0.22661	0.31585	0.93349	4.58518
64	0.68390	0.81071	0.92828	0.91468	0.22681	0.31613	0.93431	4.67164
65	0.69831	0.82496	0.94510	0.91771	0.22720	0.31669	0.93595	4.75810

Jefferson 2016 Time Period 3 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HGCV	LDDV	LDDT	HDDV	MC
3	51.31693	55.28531	63.46780	57.76747	4.36384	4.87988	34.76408	176.21736
4	40.28787	43.69579	50.16299	52.77965	4.02177	4.49736	32.03900	140.53722
5	33.67046	36.74210	42.18013	48.32869	3.71327	4.15238	29.58138	114.78461
6	29.25885	32.10632	36.85818	44.35062	3.43467	3.84084	27.36198	95.78127
7	26.10770	28.79501	33.05682	40.78955	3.18277	3.55915	25.35521	81.47229
8	23.74434	26.31155	30.20580	37.59709	2.95471	3.30412	23.53844	70.49661
9	21.90616	24.37997	27.98834	34.73076	2.74800	3.07296	21.89165	61.93298
10	20.43564	22.83472	26.21436	32.15364	2.56040	2.86318	20.39714	55.14420
11	19.23247	21.57040	24.76291	29.83334	2.38995	2.67257	19.03931	49.68173
12	18.22984	20.51682	23.55339	27.74142	2.23491	2.49920	17.80423	45.22366
13	17.38145	19.62532	22.52997	25.85301	2.09374	2.34134	16.67960	41.53534
14	16.65428	18.86119	21.65273	24.14619	1.96506	2.19744	15.65448	38.44327
15	16.02405	18.19893	20.89244	22.60175	1.84765	2.06614	14.71910	35.81725
16	15.47261	17.61946	20.22722	21.20264	1.74041	1.94622	13.86485	33.55858
17	14.98603	17.10815	19.64024	19.93401	1.64239	1.83661	13.08396	31.59164
18	14.55353	16.65367	19.11850	18.78255	1.55271	1.73633	12.36955	29.85808
19	14.16654	16.24702	18.65164	17.73654	1.47060	1.64451	11.71542	28.31242
20	13.56952	15.63041	17.94377	16.78571	1.39537	1.56038	11.11613	26.91942
21	12.79711	14.80218	16.99297	15.92083	1.32641	1.48326	10.56669	25.65132
22	12.09492	14.04924	16.12859	15.13376	1.26314	1.41251	10.06271	24.48677
23	11.45378	13.36178	15.33939	14.41729	1.20509	1.34760	9.60023	23.40891
24	10.86609	12.73160	14.61594	13.76499	1.15180	1.28800	9.17568	22.40483
25	10.32540	12.15183	13.95037	13.17114	1.10287	1.23329	8.78588	21.46481
26	9.82630	11.61666	13.33599	12.63068	1.05794	1.18305	8.42798	20.58121
27	9.36417	11.12114	12.76713	12.13907	1.01669	1.13692	8.09937	19.74846
28	8.93506	10.66101	12.23889	11.69227	0.97883	1.09458	7.79776	18.96236
29	8.53553	10.23261	11.74709	11.28674	0.94410	1.05574	7.52106	18.21996
30	8.16264	9.83277	11.28807	10.91926	0.91225	1.02013	7.26739	17.51917
31	7.81381	9.45873	10.85867	10.58700	0.88309	0.98752	7.03506	16.85826
32	7.48678	9.10806	10.45611	10.28748	0.85642	0.95769	6.82257	16.23604
33	7.17957	8.77865	10.07794	10.01844	0.83206	0.93046	6.62856	15.65201
34	6.89044	8.46862	9.72202	9.77793	0.80987	0.90565	6.45178	15.10497
35	6.61782	8.17630	9.38643	9.56420	0.78971	0.88310	6.29116	14.59469
36	6.36035	7.90022	9.06949	9.37576	0.77146	0.86268	6.14572	14.12000
37	6.11680	7.63906	8.76968	9.21127	0.75499	0.84427	6.01458	13.68070
38	5.88606	7.39165	8.48566	9.06960	0.74023	0.82776	5.89695	13.27543
39	5.66716	7.15693	8.21619	8.94976	0.72707	0.81305	5.79216	12.90328
40	5.45920	6.93394	7.96020	8.85097	0.71546	0.80006	5.69960	12.56308
41	5.26139	6.72183	7.71670	8.77255	0.70530	0.78871	5.61873	12.25345
42	5.07300	6.51983	7.48480	8.71397	0.69656	0.77894	5.54910	11.97245
43	4.89336	6.32721	7.26367	8.67485	0.68918	0.77068	5.49032	11.71836
44	4.72190	6.14335	7.05260	8.65492	0.68313	0.76391	5.44205	11.48860
45	4.55805	5.96767	6.85091	8.65406	0.67835	0.75857	5.40404	11.28082
46	4.40133	5.79962	6.65799	8.67224	0.67484	0.75465	5.37606	11.09199
47	4.25128	5.63872	6.47328	8.70961	0.67257	0.75211	5.35797	10.91841
48	4.10748	5.48453	6.29627	8.76641	0.67153	0.75094	5.34967	10.75642
49	4.10748	5.48453	6.29627	8.84301	0.67171	0.75114	5.35112	10.75642
50	4.10748	5.48453	6.29627	8.93993	0.67312	0.75272	5.36231	10.75642
51	4.10748	5.48453	6.29627	9.05781	0.67575	0.75566	5.38332	10.75642
52	4.10748	5.48453	6.29627	9.19747	0.67964	0.76001	5.41426	10.75642
53	4.10748	5.48453	6.29627	9.35983	0.68479	0.76577	5.45529	10.75642
54	4.10748	5.48453	6.29627	9.54605	0.69123	0.77298	5.50665	10.75642
55	4.10748	5.48453	6.29627	9.75741	0.69901	0.78167	5.56861	10.75642
56	4.48357	5.92752	6.80482	9.99542	0.70817	0.79191	5.64154	13.34688
57	4.85966	6.37051	7.31338	10.26178	0.71875	0.80374	5.72582	15.93734
58	5.23576	6.81350	7.82193	10.55845	0.73081	0.81724	5.82195	18.52777
59	5.61185	7.25649	8.33049	10.88763	0.74444	0.83247	5.93048	21.11824
60	5.98794	7.69948	8.83904	11.25179	0.75970	0.84953	6.05204	23.70869
61	6.36403	8.14247	9.34760	11.65374	0.77668	0.86853	6.18734	26.29915
62	6.74012	8.58546	9.85615	12.09663	0.79549	0.88956	6.33719	28.88959
63	7.11622	9.02845	10.36471	12.58401	0.81624	0.91276	6.50249	31.48007
64	7.49231	9.47144	10.87326	13.11987	0.83906	0.93828	6.68426	34.07053
65	7.86840	9.91443	11.38182	13.70862	0.86408	0.96626	6.88363	36.66095

Jefferson 2016 Time Period 3 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	1.65741	1.88183	2.29609	3.11804	1.82963	2.08625	11.26420	0.81913
4	1.51493	1.72004	2.09869	3.15030	1.75257	1.99839	10.78978	0.78349
5	1.42943	1.62297	1.98025	3.18257	1.68114	1.91694	10.35003	0.75391
6	1.37243	1.55826	1.90129	3.21483	1.61491	1.84143	9.94231	0.72993
7	1.33173	1.51204	1.84490	3.24710	1.55350	1.77140	9.56422	0.71110
8	1.30119	1.47737	1.80259	3.27936	1.49655	1.70646	9.21359	0.69700
9	1.27744	1.45041	1.76970	3.31163	1.44373	1.64623	8.88842	0.68719
10	1.25844	1.42884	1.74338	3.34389	1.39476	1.59039	8.58691	0.68129
11	1.24290	1.41119	1.72184	3.37616	1.34936	1.53863	8.30742	0.67891
12	1.22995	1.39648	1.70390	3.40842	1.30730	1.49066	8.04845	0.67968
13	1.21898	1.38404	1.68871	3.44069	1.26834	1.44624	7.80863	0.68326
14	1.20959	1.37337	1.67570	3.47296	1.23230	1.40514	7.58672	0.68930
15	1.20145	1.36412	1.66442	3.50522	1.19898	1.36715	7.38159	0.69750
16	1.19432	1.35604	1.65455	3.53749	1.16822	1.33208	7.19222	0.70754
17	1.18804	1.34890	1.64584	3.56975	1.13987	1.29975	7.01765	0.71914
18	1.18245	1.34255	1.63810	3.60202	1.11378	1.27000	6.85706	0.73204
19	1.17745	1.33688	1.63117	3.63429	1.08984	1.24270	6.70966	0.74598
20	1.18023	1.32804	1.62039	3.66655	1.06793	1.21772	6.57476	0.76073
21	1.18778	1.32956	1.62225	3.69881	1.04795	1.19493	6.45174	0.77606
22	1.19464	1.33095	1.62394	3.73108	1.02980	1.17424	6.34000	0.79177
23	1.20091	1.33221	1.62548	3.76334	1.01340	1.15554	6.23906	0.80768
24	1.20666	1.33337	1.62689	3.79561	0.99868	1.13876	6.14845	0.82360
25	1.21194	1.33444	1.62819	3.82788	0.98558	1.12382	6.06776	0.83940
26	1.21682	1.33542	1.62939	3.86014	0.97403	1.11064	5.99664	0.85492
27	1.22133	1.33633	1.63051	3.89241	0.96398	1.09919	5.93478	0.87005
28	1.22553	1.33718	1.63154	3.92467	0.95539	1.08939	5.88189	0.88468
29	1.22943	1.33797	1.63250	3.95694	0.94822	1.08122	5.83778	0.89872
30	1.23308	1.33870	1.63340	3.98921	0.94244	1.07463	5.80221	0.91210
31	1.23649	1.33939	1.63424	4.02147	0.93804	1.06960	5.77506	0.92477
32	1.23969	1.34003	1.63503	4.05374	0.93497	1.06611	5.75621	0.93667
33	1.24269	1.34064	1.63577	4.08600	0.93324	1.06414	5.74557	0.94779
34	1.24551	1.34121	1.63646	4.11827	0.93284	1.06369	5.74310	0.95811
35	1.24818	1.34175	1.63712	4.15054	0.93377	1.06474	5.74879	0.96766
36	1.25069	1.34226	1.63774	4.18280	0.93602	1.06731	5.76266	0.97644
37	1.25307	1.34274	1.63832	4.21506	0.93961	1.07140	5.78478	0.98451
38	1.25533	1.34319	1.63888	4.24733	0.94456	1.07704	5.81522	0.99191
39	1.25747	1.34363	1.63941	4.27960	0.95088	1.08425	5.85414	0.99874
40	1.25950	1.34404	1.63991	4.31186	0.95860	1.09306	5.90170	1.00506
41	1.26143	1.34443	1.64038	4.34413	0.96776	1.10350	5.95808	1.01099
42	1.26328	1.34480	1.64084	4.37640	0.97840	1.11563	6.02356	1.01666
43	1.26503	1.34515	1.64127	4.40866	0.99056	1.12949	6.09842	1.02219
44	1.26671	1.34549	1.64168	4.44093	1.00429	1.14515	6.18297	1.02776
45	1.26831	1.34581	1.64208	4.47319	1.01966	1.16268	6.27761	1.03352
46	1.26984	1.34612	1.64245	4.50546	1.03674	1.18216	6.38275	1.03967
47	1.27131	1.34642	1.64282	4.53772	1.05560	1.20366	6.49888	1.04641
48	1.27271	1.34670	1.64316	4.56999	1.07633	1.22730	6.62651	1.05396
49	1.30914	1.39663	1.70408	4.60225	1.09903	1.25319	6.76627	1.08828
50	1.34557	1.44656	1.76500	4.63452	1.12381	1.28144	6.91878	1.12260
51	1.38199	1.49649	1.82592	4.66679	1.15077	1.31218	7.08478	1.15692
52	1.41842	1.54642	1.88685	4.69905	1.18005	1.34557	7.26508	1.19124
53	1.45484	1.59635	1.94777	4.73132	1.21181	1.38178	7.46055	1.22556
54	1.49127	1.64628	2.00869	4.76358	1.24618	1.42097	7.67216	1.25988
55	1.52770	1.69621	2.06961	4.79585	1.28335	1.46335	7.90101	1.29420
56	1.56413	1.74614	2.13053	4.82811	1.32350	1.50914	8.14822	1.32852
57	1.60055	1.79607	2.19145	4.86038	1.36685	1.55857	8.41512	1.36284
58	1.63698	1.84600	2.25237	4.89264	1.41363	1.61191	8.70310	1.39716
59	1.67340	1.89593	2.31330	4.92491	1.46409	1.66944	9.01373	1.43147
60	1.70983	1.94586	2.37422	4.95718	1.51850	1.73148	9.34873	1.46579
61	1.74626	1.99579	2.43514	4.98944	1.57717	1.79839	9.70993	1.50011
62	1.78268	2.04572	2.49606	5.02171	1.64044	1.87053	10.09943	1.53443
63	1.81911	2.09565	2.55698	5.05397	1.70866	1.94832	10.51949	1.56875
64	1.85554	2.14558	2.61791	5.08624	1.78226	2.03224	10.97258	1.60307
65	1.89196	2.19551	2.67883	5.11851	1.86166	2.12279	11.46145	1.63739

Jefferson 2016 Time Period 4 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	5.22485	6.21598	7.18290	7.61995	1.07579	1.49948	4.43164	11.26336
4	3.83140	4.55996	5.27538	6.33926	1.02136	1.42362	4.20742	9.48814
5	3.06746	3.64485	4.21936	5.53273	0.97054	1.35278	3.99806	8.17334
6	2.58823	3.06748	3.55222	4.93910	0.92306	1.28660	3.80247	7.18093
7	2.26064	2.67110	3.09376	4.46508	0.87867	1.22473	3.61962	6.41890
8	2.04942	2.41110	2.79115	4.10503	0.83716	1.16687	3.44860	5.82458
9	1.88716	2.21063	2.55789	3.78948	0.79831	1.11271	3.28856	5.35439
10	1.75652	2.04894	2.37001	3.50733	0.76193	1.06201	3.13870	4.97744
11	1.64886	1.91546	2.21513	3.25396	0.72785	1.01451	2.99831	4.67149
12	1.55844	1.80313	2.08500	3.02568	0.69590	0.96998	2.86672	4.42021
13	1.48129	1.70707	1.97390	2.81943	0.66595	0.92823	2.74332	4.21146
14	1.41456	1.62379	1.87776	2.63262	0.63784	0.88905	2.62754	4.03608
15	1.35617	1.55075	1.79359	2.46306	0.61146	0.85228	2.51887	3.88704
16	1.30455	1.48601	1.71914	2.30886	0.58669	0.81775	2.41681	3.75895
17	1.25851	1.42812	1.65270	2.16835	0.56341	0.78531	2.32093	3.64756
18	1.21712	1.37593	1.59293	2.04011	0.54154	0.75482	2.23082	3.54954
19	1.17964	1.32854	1.53877	1.92287	0.52097	0.72615	2.14609	3.46229
20	1.13201	1.27441	1.47617	1.81693	0.50162	0.69919	2.06640	3.38369
21	1.08327	1.22370	1.41685	1.72202	0.48342	0.67382	1.99142	3.31211
22	1.03890	1.17757	1.36287	1.63514	0.46629	0.64994	1.92085	3.24624
23	0.99831	1.13541	1.31355	1.55552	0.45016	0.62746	1.85441	3.18506
24	0.96104	1.09672	1.26831	1.48247	0.43498	0.60629	1.79185	3.12777
25	0.92669	1.06109	1.22664	1.41538	0.42067	0.58635	1.73292	3.07377
26	0.89493	1.02816	1.18815	1.35369	0.40719	0.56757	1.67741	3.02260
27	0.86546	0.99764	1.15248	1.29693	0.39450	0.54987	1.62510	2.97392
28	0.83803	0.96927	1.11931	1.24465	0.38253	0.53319	1.57581	2.92753
29	0.81245	0.94282	1.08841	1.19646	0.37126	0.51747	1.52936	2.88327
30	0.78852	0.91810	1.05954	1.15199	0.36063	0.50266	1.48559	2.84105
31	0.76608	0.89495	1.03250	1.11094	0.35062	0.48870	1.44433	2.80086
32	0.74500	0.87322	1.00712	1.07303	0.34118	0.47555	1.40547	2.76266
33	0.72515	0.85277	0.98325	1.03799	0.33229	0.46316	1.36885	2.72652
34	0.70642	0.83350	0.96076	1.00558	0.32392	0.45149	1.33436	2.69244
35	0.68872	0.81530	0.93953	0.97561	0.31603	0.44050	1.30188	2.66049
36	0.67195	0.79809	0.91945	0.94789	0.30861	0.43016	1.27131	2.63071
37	0.65605	0.78179	0.90043	0.92223	0.30163	0.42043	1.24256	2.60312
38	0.64095	0.76632	0.88239	0.89850	0.29507	0.41128	1.21552	2.57777
39	0.62658	0.75161	0.86526	0.87654	0.28890	0.40269	1.19012	2.55466
40	0.61289	0.73762	0.84895	0.85624	0.28311	0.39462	1.16627	2.53378
41	0.59983	0.72429	0.83342	0.83748	0.27769	0.38705	1.14391	2.51513
42	0.58736	0.71158	0.81861	0.82016	0.27260	0.37996	1.12296	2.49862
43	0.57543	0.69943	0.80447	0.80418	0.26785	0.37334	1.10337	2.48414
44	0.56400	0.68781	0.79094	0.78947	0.26340	0.36715	1.08508	2.47162
45	0.55305	0.67669	0.77800	0.77594	0.25927	0.36138	1.06802	2.46089
46	0.54255	0.66603	0.76560	0.76353	0.25542	0.35601	1.05217	2.45173
47	0.53245	0.65581	0.75371	0.75218	0.25184	0.35103	1.03746	2.44387
48	0.52275	0.64596	0.74226	0.74182	0.24854	0.34643	1.02385	2.43701
49	0.52140	0.64449	0.74062	0.73226	0.24550	0.34219	1.01131	2.43701
50	0.52013	0.64311	0.73908	0.72368	0.24271	0.33829	0.99981	2.43701
51	0.51893	0.64182	0.73762	0.71605	0.24016	0.33474	0.98931	2.43701
52	0.51780	0.64059	0.73625	0.70933	0.23784	0.33152	0.97978	2.43701
53	0.51673	0.63943	0.73495	0.70349	0.23576	0.32861	0.97119	2.43701
54	0.51572	0.63834	0.73373	0.69848	0.23390	0.32602	0.96353	2.43701
55	0.51477	0.63730	0.73257	0.69430	0.23226	0.32373	0.95677	2.43701
56	0.52927	0.65166	0.74950	0.69092	0.23083	0.32174	0.95090	2.52449
57	0.54383	0.66607	0.76650	0.68833	0.22962	0.32005	0.94589	2.61198
58	0.55843	0.68052	0.78355	0.68651	0.22861	0.31864	0.94174	2.69948
59	0.57307	0.69502	0.80064	0.68546	0.22781	0.31753	0.93843	2.78697
60	0.58774	0.70956	0.81778	0.68518	0.22720	0.31669	0.93595	2.87445
61	0.60246	0.72414	0.83497	0.68565	0.22680	0.31613	0.93431	2.96195
62	0.61720	0.73876	0.85220	0.68690	0.22661	0.31585	0.93349	3.04944
63	0.63198	0.75341	0.86946	0.68892	0.22661	0.31585	0.93349	3.13693
64	0.64678	0.76809	0.88676	0.69174	0.22681	0.31613	0.93431	3.22442
65	0.66162	0.78280	0.90409	0.69535	0.22720	0.31669	0.93595	3.31191

Jefferson 2016 Time Period 4 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	51.31693	55.28531	63.46780	57.54317	4.36384	4.87988	34.76408	141.85571
4	40.28787	43.69579	50.16299	52.57471	4.02177	4.49736	32.03900	113.13304
5	33.67046	36.74210	42.18013	48.14102	3.71327	4.15238	29.58138	92.40211
6	29.25885	32.10632	36.85818	44.17834	3.43467	3.84084	27.36198	77.10434
7	26.10770	28.79501	33.05682	40.63116	3.18277	3.55915	25.35521	65.58554
8	23.74434	26.31155	30.20580	37.45105	2.95471	3.30412	23.53844	56.75009
9	21.90616	24.37997	27.98834	34.59590	2.74800	3.07296	21.89165	49.85631
10	20.43564	22.83472	26.21436	32.02876	2.56040	2.86318	20.39714	44.39134
11	19.23247	21.57040	24.76291	29.71747	2.38995	2.67257	19.03931	39.99400
12	18.22984	20.51682	23.55339	27.63371	2.23491	2.49920	17.80423	36.40523
13	17.38145	19.62532	22.52997	25.75262	2.09374	2.34134	16.67960	33.43611
14	16.65428	18.86119	21.65273	24.05240	1.96506	2.19744	15.65448	30.94699
15	16.02405	18.19893	20.89244	22.51399	1.84765	2.06614	14.71910	28.83302
16	15.47261	17.61946	20.22722	21.12032	1.74041	1.94622	13.86485	27.01480
17	14.98603	17.10815	19.64024	19.85660	1.64239	1.83661	13.08396	25.43141
18	14.55353	16.65367	19.11850	18.70959	1.55271	1.73633	12.36955	24.03587
19	14.16654	16.24702	18.65164	17.66766	1.47060	1.64451	11.71542	22.79163
20	13.56952	15.63041	17.94377	16.72054	1.39537	1.56038	11.11613	21.67024
21	12.79711	14.80218	16.99297	15.85901	1.32641	1.48326	10.56669	20.64943
22	12.09492	14.04924	16.12859	15.07499	1.26314	1.41251	10.06271	19.71196
23	11.45378	13.36178	15.33939	14.36130	1.20509	1.34760	9.60023	18.84428
24	10.86609	12.73160	14.61594	13.71153	1.15180	1.28800	9.17568	18.03600
25	10.32540	12.15183	13.95037	13.12000	1.10287	1.23329	8.78588	17.27928
26	9.82630	11.61666	13.33599	12.58163	1.05794	1.18305	8.42798	16.56796
27	9.36417	11.12114	12.76713	12.09193	1.01669	1.13692	8.09937	15.89761
28	8.93506	10.66101	12.23889	11.64687	0.97883	1.09458	7.79776	15.26478
29	8.53553	10.23261	11.74709	11.24291	0.94410	1.05574	7.52106	14.66715
30	8.16264	9.83277	11.28807	10.87686	0.91225	1.02013	7.26739	14.10301
31	7.81381	9.45873	10.85867	10.54589	0.88309	0.98752	7.03506	13.57097
32	7.48678	9.10806	10.45611	10.24753	0.85642	0.95769	6.82257	13.07009
33	7.17957	8.77865	10.07794	9.97954	0.83206	0.93046	6.62856	12.59994
34	6.89044	8.46862	9.72202	9.73996	0.80987	0.90565	6.45178	12.15956
35	6.61782	8.17630	9.38643	9.52707	0.78971	0.88310	6.29116	11.74879
36	6.36035	7.90022	9.06949	9.33935	0.77146	0.86268	6.14572	11.36666
37	6.11680	7.63906	8.76968	9.17550	0.75499	0.84427	6.01458	11.01302
38	5.88606	7.39165	8.48566	9.03438	0.74023	0.82776	5.89695	10.68678
39	5.66716	7.15693	8.21619	8.91501	0.72707	0.81305	5.79216	10.38719
40	5.45920	6.93394	7.96020	8.81660	0.71546	0.80006	5.69960	10.11333
41	5.26139	6.72183	7.71670	8.73848	0.70530	0.78871	5.61873	9.86408
42	5.07300	6.51983	7.48480	8.68013	0.69656	0.77894	5.54910	9.63788
43	4.89336	6.32721	7.26367	8.64116	0.68918	0.77068	5.49032	9.43333
44	4.72190	6.14335	7.05260	8.62130	0.68313	0.76391	5.44205	9.24837
45	4.55805	5.96767	6.85091	8.62045	0.67835	0.75857	5.40404	9.08111
46	4.40133	5.79962	6.65799	8.63857	0.67484	0.75465	5.37606	8.92910
47	4.25128	5.63872	6.47328	8.67579	0.67257	0.75211	5.35797	8.78936
48	4.10748	5.48453	6.29627	8.73237	0.67153	0.75094	5.34967	8.65897
49	4.10748	5.48453	6.29627	8.80867	0.67171	0.75114	5.35112	8.65897
50	4.10748	5.48453	6.29627	8.90521	0.67312	0.75272	5.36231	8.65897
51	4.10748	5.48453	6.29627	9.02263	0.67575	0.75566	5.38332	8.65897
52	4.10748	5.48453	6.29627	9.16175	0.67964	0.76001	5.41426	8.65897
53	4.10748	5.48453	6.29627	9.32348	0.68479	0.76577	5.45529	8.65897
54	4.10748	5.48453	6.29627	9.50898	0.69123	0.77298	5.50665	8.65897
55	4.10748	5.48453	6.29627	9.71952	0.69901	0.78167	5.56861	8.65897
56	4.48357	5.92752	6.80482	9.95661	0.70817	0.79191	5.64154	10.74429
57	4.85966	6.37051	7.31338	10.22194	0.71875	0.80374	5.72582	12.82962
58	5.23576	6.81350	7.82193	10.51745	0.73081	0.81724	5.82195	14.91495
59	5.61185	7.25649	8.33049	10.84535	0.74444	0.83247	5.93048	17.00027
60	5.98794	7.69948	8.83904	11.20809	0.75970	0.84953	6.05204	19.08560
61	6.36403	8.14247	9.34760	11.60849	0.77668	0.86853	6.18734	21.17093
62	6.74012	8.58546	9.85615	12.04966	0.79549	0.88956	6.33719	23.25624
63	7.11622	9.02845	10.36471	12.53515	0.81624	0.91276	6.50249	25.34158
64	7.49231	9.47144	10.87326	13.06892	0.83906	0.93828	6.68426	27.42693
65	7.86840	9.91443	11.38182	13.65538	0.86408	0.96626	6.88363	29.51224

Jefferson 2016 Time Period 4 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	1.63039	1.85089	2.25809	3.06217	1.82963	2.08625	11.26420	0.90987
4	1.49022	1.69177	2.06396	3.09385	1.75257	1.99839	10.78978	0.87028
5	1.40613	1.59629	1.94748	3.12554	1.68114	1.91694	10.35003	0.83742
6	1.35006	1.53264	1.86983	3.15723	1.61491	1.84143	9.94231	0.81079
7	1.31001	1.48718	1.81436	3.18892	1.55350	1.77140	9.56422	0.78987
8	1.27998	1.45308	1.77276	3.22060	1.49655	1.70646	9.21359	0.77420
9	1.25661	1.42656	1.74041	3.25229	1.44373	1.64623	8.88842	0.76331
10	1.23793	1.40534	1.71452	3.28398	1.39476	1.59039	8.58691	0.75676
11	1.22263	1.38799	1.69335	3.31567	1.34936	1.53863	8.30742	0.75411
12	1.20989	1.37352	1.67570	3.34735	1.30730	1.49066	8.04845	0.75497
13	1.19911	1.36128	1.66076	3.37904	1.26834	1.44624	7.80863	0.75894
14	1.18987	1.35079	1.64797	3.41073	1.23230	1.40514	7.58672	0.76566
15	1.18186	1.34170	1.63687	3.44242	1.19898	1.36715	7.38159	0.77476
16	1.17485	1.33374	1.62716	3.47410	1.16822	1.33208	7.19222	0.78591
17	1.16867	1.32672	1.61860	3.50579	1.13987	1.29975	7.01765	0.79880
18	1.16317	1.32048	1.61099	3.53748	1.11378	1.27000	6.85706	0.81313
19	1.15825	1.31490	1.60418	3.56917	1.08984	1.24270	6.70966	0.82862
20	1.16099	1.30620	1.59357	3.60086	1.06793	1.21772	6.57476	0.84500
21	1.16842	1.30770	1.59540	3.63254	1.04795	1.19493	6.45174	0.86203
22	1.17517	1.30906	1.59706	3.66423	1.02980	1.17424	6.34000	0.87948
23	1.18133	1.31031	1.59858	3.69592	1.01340	1.15554	6.23906	0.89714
24	1.18698	1.31145	1.59997	3.72760	0.99868	1.13876	6.14845	0.91483
25	1.19218	1.31250	1.60125	3.75929	0.98558	1.12382	6.06776	0.93238
26	1.19698	1.31346	1.60243	3.79098	0.97403	1.11064	5.99664	0.94962
27	1.20142	1.31436	1.60352	3.82267	0.96398	1.09919	5.93478	0.96643
28	1.20555	1.31520	1.60454	3.85435	0.95539	1.08939	5.88189	0.98268
29	1.20939	1.31597	1.60548	3.88604	0.94822	1.08122	5.83778	0.99828
30	1.21297	1.31669	1.60637	3.91773	0.94244	1.07463	5.80221	1.01314
31	1.21633	1.31737	1.60719	3.94942	0.93804	1.06960	5.77506	1.02720
32	1.21947	1.31800	1.60797	3.98110	0.93497	1.06611	5.75621	1.04042
33	1.22243	1.31860	1.60869	4.01279	0.93324	1.06414	5.74557	1.05277
34	1.22520	1.31916	1.60938	4.04448	0.93284	1.06369	5.74310	1.06424
35	1.22783	1.31969	1.61002	4.07617	0.93377	1.06474	5.74879	1.07484
36	1.23030	1.32019	1.61063	4.10785	0.93602	1.06731	5.76266	1.08460
37	1.23264	1.32066	1.61121	4.13954	0.93961	1.07140	5.78478	1.09356
38	1.23486	1.32111	1.61175	4.17123	0.94456	1.07704	5.81522	1.10179
39	1.23697	1.32154	1.61227	4.20292	0.95088	1.08425	5.85414	1.10937
40	1.23897	1.32194	1.61277	4.23461	0.95860	1.09306	5.90170	1.11639
41	1.24087	1.32232	1.61323	4.26629	0.96776	1.10350	5.95808	1.12298
42	1.24268	1.32269	1.61368	4.29798	0.97840	1.11563	6.02356	1.12927
43	1.24441	1.32304	1.61411	4.32967	0.99056	1.12949	6.09842	1.13542
44	1.24605	1.32337	1.61451	4.36135	1.00429	1.14515	6.18297	1.14161
45	1.24763	1.32369	1.61490	4.39304	1.01966	1.16268	6.27761	1.14801
46	1.24914	1.32399	1.61527	4.42473	1.03674	1.18216	6.38275	1.15484
47	1.25058	1.32428	1.61563	4.45642	1.05560	1.20366	6.49888	1.16232
48	1.25196	1.32456	1.61597	4.48811	1.07633	1.22730	6.62651	1.17071
49	1.28779	1.37367	1.67588	4.51979	1.09903	1.25319	6.76627	1.20883
50	1.32363	1.42278	1.73579	4.55148	1.12381	1.28144	6.91878	1.24695
51	1.35946	1.47189	1.79570	4.58317	1.15077	1.31218	7.08478	1.28507
52	1.39529	1.52100	1.85562	4.61486	1.18005	1.34557	7.26508	1.32319
53	1.43112	1.57011	1.91553	4.64654	1.21181	1.38178	7.46055	1.36131
54	1.46696	1.61922	1.97544	4.67823	1.24618	1.42097	7.67216	1.39944
55	1.50279	1.66833	2.03536	4.70992	1.28335	1.46335	7.90101	1.43756
56	1.53862	1.71744	2.09527	4.74160	1.32350	1.50914	8.14822	1.47568
57	1.57445	1.76654	2.15518	4.77329	1.36685	1.55857	8.41512	1.51380
58	1.61029	1.81565	2.21510	4.80498	1.41363	1.61191	8.70310	1.55192
59	1.64612	1.86476	2.27501	4.83667	1.46409	1.66944	9.01373	1.59004
60	1.68195	1.91387	2.33492	4.86836	1.51850	1.73148	9.34873	1.62816
61	1.71778	1.96298	2.39484	4.90005	1.57717	1.79839	9.70993	1.66628
62	1.75362	2.01209	2.45475	4.93173	1.64044	1.87053	10.09943	1.70440
63	1.78945	2.06120	2.51466	4.96342	1.70866	1.94832	10.51949	1.74253
64	1.82528	2.11031	2.57458	4.99511	1.78226	2.03224	10.97258	1.78065
65	1.86111	2.15942	2.63449	5.02679	1.86166	2.12279	11.46145	1.81877

Orange 1996 Time Period 1 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	8.35889	10.04469	12.36225	19.74455	1.63085	2.30749	6.08451	15.62037
4	6.17317	7.48862	9.18260	16.22879	1.54834	2.19074	5.77666	13.16975
5	4.93627	6.01396	7.33475	14.08056	1.47129	2.08173	5.48922	11.35471
6	4.14275	5.05560	6.12820	12.53553	1.39931	1.97989	5.22067	9.98472
7	3.59144	4.38434	5.28131	11.32206	1.33203	1.88468	4.96963	8.93278
8	3.23398	3.93855	4.71395	10.42653	1.26909	1.79563	4.73483	8.11234
9	2.95682	3.59070	4.27283	9.64576	1.21020	1.71230	4.51509	7.46325
10	2.73126	3.30688	3.91527	8.94874	1.15505	1.63427	4.30934	6.94289
11	2.54328	3.06979	3.61888	8.32352	1.10339	1.56117	4.11659	6.52054
12	2.38348	2.86775	3.36841	7.76058	1.05496	1.49266	3.93592	6.17365
13	2.24535	2.69259	3.15319	7.25214	1.00955	1.42840	3.76650	5.88549
14	2.12422	2.53845	2.96548	6.79170	0.96694	1.36812	3.60753	5.64338
15	2.01666	2.40100	2.79961	6.37373	0.92695	1.31153	3.45833	5.43764
16	1.92012	2.27699	2.65127	5.99350	0.88940	1.25840	3.31821	5.26081
17	1.83261	2.16392	2.51722	5.64692	0.85411	1.20847	3.18657	5.10704
18	1.75262	2.05987	2.39489	5.33041	0.82095	1.16155	3.06284	4.97174
19	1.67894	1.96334	2.28231	5.04084	0.78977	1.11744	2.94652	4.85128
20	1.60867	1.88454	2.18980	4.77993	0.76044	1.07595	2.83711	4.74278
21	1.54763	1.81745	2.10918	4.54747	0.73285	1.03691	2.73416	4.64397
22	1.49174	1.75589	2.03536	4.33465	0.70688	1.00016	2.63727	4.55304
23	1.44033	1.69911	1.96741	4.13958	0.68243	0.96557	2.54606	4.46858
24	1.39283	1.64652	1.90456	3.96055	0.65941	0.93299	2.46016	4.38949
25	1.34877	1.59763	1.84621	3.79608	0.63772	0.90231	2.37925	4.31494
26	1.30777	1.55202	1.79183	3.64481	0.61729	0.87340	2.30303	4.24430
27	1.26948	1.50938	1.74102	3.50555	0.59804	0.84617	2.23121	4.17711
28	1.23363	1.46940	1.69341	3.37723	0.57990	0.82050	2.16354	4.11307
29	1.19996	1.43186	1.64872	3.25887	0.56281	0.79632	2.09976	4.05197
30	1.16827	1.39657	1.60670	3.14963	0.54670	0.77352	2.03966	3.99369
31	1.13838	1.36334	1.56715	3.04871	0.53152	0.75205	1.98303	3.93820
32	1.11012	1.33203	1.52988	2.95543	0.51722	0.73181	1.92966	3.88547
33	1.08335	1.30251	1.49474	2.86916	0.50374	0.71274	1.87938	3.83558
34	1.05795	1.27466	1.46160	2.78933	0.49105	0.69478	1.83203	3.78853
35	1.03382	1.24838	1.43032	2.71542	0.47910	0.67787	1.78744	3.74443
36	1.01084	1.22357	1.40080	2.64699	0.46785	0.66195	1.74547	3.70332
37	0.98894	1.20013	1.37294	2.58361	0.45726	0.64698	1.70599	3.66524
38	0.96804	1.17799	1.34663	2.52491	0.44731	0.63290	1.66887	3.63024
39	0.94806	1.15707	1.32179	2.47055	0.43797	0.61968	1.63399	3.59834
40	0.92893	1.13729	1.29833	2.42022	0.42919	0.60726	1.60125	3.56951
41	0.91060	1.11858	1.27616	2.37365	0.42096	0.59562	1.57055	3.54376
42	0.89300	1.10086	1.25521	2.33058	0.41325	0.58471	1.54179	3.52097
43	0.87610	1.08406	1.23538	2.29080	0.40604	0.57451	1.51489	3.50098
44	0.85983	1.06812	1.21659	2.25409	0.39931	0.56498	1.48978	3.48370
45	0.84416	1.05295	1.19876	2.22027	0.39304	0.55610	1.46636	3.46888
46	0.82904	1.03848	1.18180	2.18918	0.38720	0.54785	1.44459	3.45623
47	0.81443	1.02462	1.16560	2.16068	0.38179	0.54019	1.42439	3.44539
48	0.80054	1.01139	1.15014	2.13457	0.37678	0.53310	1.40571	3.43592
49	0.79878	1.00955	1.14777	2.11048	0.37217	0.52658	1.38850	3.43592
50	0.79713	1.00781	1.14553	2.08884	0.36793	0.52059	1.37271	3.43592
51	0.79556	1.00616	1.14341	2.06953	0.36407	0.51512	1.35829	3.43592
52	0.79407	1.00461	1.14142	2.05247	0.36056	0.51016	1.34520	3.43592
53	0.79267	1.00313	1.13952	2.03755	0.35740	0.50569	1.33342	3.43592
54	0.79133	1.00174	1.13773	2.02473	0.35458	0.50170	1.32290	3.43592
55	0.79006	1.00041	1.13603	2.01392	0.35210	0.49818	1.31362	3.43592
56	0.81892	1.04313	1.18960	2.00509	0.34993	0.49512	1.30555	3.55669
57	0.84784	1.08592	1.24325	1.99820	0.34809	0.49251	1.29868	3.67747
58	0.87681	1.12876	1.29697	1.99320	0.34656	0.49035	1.29297	3.79825
59	0.90583	1.17166	1.35077	1.99009	0.34534	0.48863	1.28843	3.91902
60	0.93490	1.21461	1.40463	1.98885	0.34443	0.48734	1.28503	4.03980
61	0.96401	1.25760	1.45855	1.98949	0.34383	0.48648	1.28277	4.16058
62	0.99317	1.30064	1.51253	1.99200	0.34353	0.48605	1.28164	4.28135
63	1.02236	1.34372	1.56656	1.99641	0.34353	0.48605	1.28165	4.40213
64	1.05159	1.38684	1.62064	2.00275	0.34383	0.48648	1.28277	4.52291
65	1.08086	1.43000	1.67477	2.01105	0.34443	0.48734	1.28503	4.64368

Orange 1996 Time Period 1 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HOGV	LDDV	LDDT	HDDV	MC
3	79.04326	99.22447	123.72986	225.61275	5.34957	6.15454	41.37212	156.24843
4	60.79376	76.36089	95.14919	206.13271	4.93024	5.67210	38.12904	124.61154
5	49.76807	62.35513	77.30112	188.74934	4.55205	5.23701	35.20430	101.77719
6	42.38972	52.91794	65.13486	173.21275	4.21052	4.84409	32.56302	84.92731
7	37.11107	46.15117	56.35551	159.30496	3.90172	4.48882	30.17480	72.23981
8	33.15157	41.07915	49.75569	146.83656	3.62215	4.16718	28.01268	62.50790
9	30.07436	37.14742	44.63637	135.64212	3.36874	3.87564	26.05284	54.91469
10	27.61584	34.01744	40.56422	125.57710	3.13876	3.61106	24.27428	48.89522
11	25.60750	31.47076	37.25684	116.51509	2.92981	3.37067	22.65836	44.05174
12	23.93663	29.36040	34.52254	108.34505	2.73975	3.15201	21.18849	40.09886
13	22.52499	27.58377	32.22707	100.96977	2.56669	2.95291	19.85011	36.82852
14	21.31662	26.06725	30.27373	94.30367	2.40894	2.77142	18.63011	34.08682
15	20.27043	24.75659	28.59135	88.27184	2.26501	2.60583	17.51695	31.75841
16	19.35561	23.61118	27.12660	82.80756	2.13355	2.45459	16.50032	29.75568
17	18.54857	22.59991	25.83867	77.85284	2.01338	2.31634	15.57101	28.01164
18	17.83102	21.69876	24.69601	73.35576	1.90345	2.18986	14.72080	26.47450
19	17.18854	20.88890	23.67395	69.27057	1.80279	2.07406	13.94234	25.10403
20	16.49931	20.17424	22.80367	65.55704	1.71057	1.96796	13.22913	23.86887
21	15.76421	19.35619	21.87132	62.17917	1.62602	1.87069	12.57524	22.74452
22	15.09503	18.60696	21.02080	59.10527	1.54847	1.78147	11.97547	21.71191
23	14.48310	17.91727	20.24081	56.30705	1.47730	1.69959	11.42508	20.75623
24	13.92125	17.27963	19.52229	53.75943	1.41197	1.62443	10.91983	19.86594
25	13.40347	16.68796	18.85771	51.44017	1.35199	1.55542	10.45594	19.03242
26	12.92473	16.13730	18.24095	49.32938	1.29691	1.49206	10.03000	18.24895
27	12.48077	15.62360	17.66693	47.40939	1.24635	1.43389	9.63893	17.51057
28	12.06798	15.14349	17.13141	45.66438	1.19993	1.38049	9.27999	16.81354
29	11.68322	14.69418	16.63089	44.08058	1.15736	1.33150	8.95069	16.15527
30	11.32383	14.27330	16.16238	42.64540	1.11832	1.28660	8.64880	15.53391
31	10.98749	13.87883	15.72338	41.34773	1.08257	1.24547	8.37231	14.94789
32	10.67214	13.50899	15.31167	40.17793	1.04987	1.20785	8.11943	14.39618
33	10.37601	13.16221	14.92537	39.12721	1.02002	1.17350	7.88854	13.87833
34	10.09753	12.83712	14.56278	38.18788	0.99282	1.14220	7.67815	13.39327
35	9.83527	12.53241	14.22240	37.35316	0.96810	1.11377	7.48700	12.94082
36	9.58799	12.24691	13.90289	36.61716	0.94572	1.08802	7.31392	12.51992
37	9.35456	11.97951	13.60301	35.97473	0.92554	1.06480	7.15785	12.13041
38	9.13397	11.72920	13.32158	35.42146	0.90744	1.04398	7.01786	11.77106
39	8.92529	11.49497	13.05750	34.95346	0.89131	1.02543	6.89316	11.44108
40	8.72766	11.27587	12.80975	34.56763	0.87707	1.00904	6.78300	11.13943
41	8.54034	11.07098	12.57732	34.26135	0.86462	0.99473	6.68676	10.86489
42	8.36258	10.87935	12.35918	34.03255	0.85391	0.98240	6.60389	10.61574
43	8.19374	10.70006	12.15439	33.87975	0.84486	0.97199	6.53394	10.39043
44	8.03317	10.53213	11.96193	33.80193	0.83744	0.96345	6.47649	10.18671
45	7.88029	10.37452	11.78080	33.79857	0.83159	0.95672	6.43126	10.00248
46	7.73451	10.22608	11.60992	33.86960	0.82728	0.95176	6.39796	9.83504
47	7.59526	10.08556	11.44811	34.01553	0.82450	0.94856	6.37643	9.68113
48	7.46200	9.95158	11.29422	34.23737	0.82322	0.94709	6.36656	9.53751
49	7.46200	9.95158	11.29422	34.53653	0.82344	0.94735	6.36828	9.53751
50	7.46200	9.95158	11.29422	34.91505	0.82517	0.94933	6.38160	9.53751
51	7.46200	9.95158	11.29422	35.37541	0.82840	0.95305	6.40660	9.53751
52	7.46200	9.95158	11.29422	35.92085	0.83316	0.95853	6.44342	9.53751
53	7.46200	9.95158	11.29422	36.55498	0.83947	0.96579	6.49225	9.53751
54	7.46200	9.95158	11.29422	37.28230	0.84738	0.97488	6.55337	9.53751
55	7.46200	9.95158	11.29422	38.10777	0.85691	0.98585	6.62712	9.53751
56	8.50421	11.60752	13.29564	39.03732	0.86813	0.99876	6.71390	11.83441
57	9.54643	13.26347	15.29706	40.07759	0.88110	1.01368	6.81421	14.13133
58	10.58865	14.91941	17.29845	41.23625	0.89590	1.03070	6.92861	16.42822
59	11.63087	16.57535	19.29985	42.52184	0.91260	1.04992	7.05777	18.73211
60	12.67308	18.23128	21.30128	43.94408	0.93130	1.07144	7.20243	21.02200
61	13.71531	19.88721	23.30266	45.51392	0.95212	1.09539	7.36346	23.31889
62	14.75751	21.54312	25.30409	47.24365	0.97518	1.12192	7.54179	25.61577
63	15.79973	23.19908	27.30551	49.14713	1.00062	1.15118	7.73851	27.91270
64	16.84193	24.85503	29.30692	51.23991	1.02859	1.18336	7.95483	30.20959
65	17.88416	26.51099	31.30833	53.53926	1.05927	1.21866	8.19210	32.50648

Orange 1996 Time Period 1 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	2.07887	2.31979	2.55709	4.57528	2.74037	3.13502	27.83104	0.91266
4	1.90943	2.13228	2.36029	4.62262	2.62495	3.00298	26.65887	0.87295
5	1.80682	2.01902	2.24242	4.66997	2.51797	2.88059	25.57236	0.83999
6	1.73773	1.94323	2.16419	4.71732	2.41878	2.76712	24.56497	0.81327
7	1.68792	1.88909	2.10875	4.76466	2.32680	2.66189	23.63083	0.79230
8	1.65023	1.84867	2.06764	4.81201	2.24149	2.56430	22.76448	0.77658
9	1.62068	1.81754	2.03616	4.85935	2.16238	2.47380	21.96109	0.76565
10	1.59689	1.79303	2.01147	4.90670	2.08903	2.38988	21.21614	0.75908
11	1.57732	1.77341	1.99175	4.95404	2.02104	2.31210	20.52560	0.75643
12	1.56096	1.75752	1.97579	5.00139	1.95804	2.24002	19.88574	0.75729
13	1.54709	1.74454	1.96273	5.04873	1.89969	2.17327	19.29320	0.76127
14	1.53520	1.73388	1.95196	5.09608	1.84571	2.11151	18.74493	0.76801
15	1.52492	1.72510	1.94302	5.14342	1.79580	2.05442	18.23810	0.77713
16	1.51595	1.71783	1.93556	5.19077	1.74973	2.00172	17.77022	0.78832
17	1.50808	1.71183	1.92932	5.23812	1.70726	1.95313	17.33893	0.80125
18	1.50114	1.70688	1.92408	5.28546	1.66819	1.90844	16.94214	0.81563
19	1.49498	1.70280	1.91967	5.33281	1.63234	1.86741	16.57796	0.83116
20	1.49591	1.70175	1.91858	5.38015	1.59952	1.82987	16.24466	0.84759
21	1.50431	1.71340	1.93161	5.42749	1.56958	1.79563	15.94070	0.86467
22	1.51201	1.72426	1.94366	5.47484	1.54240	1.76453	15.66463	0.88217
23	1.51911	1.73440	1.95485	5.52219	1.51784	1.73643	15.41523	0.89989
24	1.52569	1.74390	1.96527	5.56953	1.49580	1.71122	15.19134	0.91764
25	1.53180	1.75281	1.97499	5.61688	1.47617	1.68876	14.99198	0.93524
26	1.53752	1.76118	1.98410	5.66422	1.45887	1.66897	14.81627	0.95253
27	1.54288	1.76906	1.99264	5.71157	1.44382	1.65175	14.66341	0.96939
28	1.54792	1.77647	2.00067	5.75891	1.43095	1.63703	14.53276	0.98569
29	1.55269	1.78346	2.00823	5.80626	1.42022	1.62475	14.42374	1.00134
30	1.55721	1.79005	2.01537	5.85360	1.41157	1.61485	14.33588	1.01624
31	1.56151	1.79626	2.02212	5.90095	1.40496	1.60730	14.26879	1.03035
32	1.56561	1.80213	2.02852	5.94829	1.40038	1.60205	14.22222	1.04361
33	1.56954	1.80767	2.03461	5.99564	1.39779	1.59909	14.19593	1.05600
34	1.57332	1.81292	2.04040	6.04298	1.39719	1.59840	14.18982	1.06751
35	1.57697	1.81789	2.04595	6.09033	1.39857	1.59998	14.20389	1.07814
36	1.58050	1.82261	2.05127	6.13768	1.40195	1.60384	14.23815	1.08793
37	1.58393	1.82710	2.05639	6.18502	1.40733	1.61000	14.29280	1.09692
38	1.58728	1.83139	2.06134	6.23237	1.41473	1.61847	14.36803	1.10517
39	1.59056	1.83551	2.06617	6.27971	1.42420	1.62930	14.46417	1.11277
40	1.59378	1.83949	2.07088	6.32706	1.43577	1.64254	14.58167	1.11981
41	1.59697	1.84334	2.07553	6.37440	1.44949	1.65824	14.72099	1.12642
42	1.60013	1.84712	2.08013	6.42175	1.46542	1.67646	14.88278	1.13274
43	1.60329	1.85084	2.08472	6.46909	1.48363	1.69729	15.06774	1.13891
44	1.60645	1.85454	2.08933	6.51644	1.50420	1.72083	15.27664	1.14511
45	1.60963	1.85826	2.09401	6.56378	1.52722	1.74716	15.51046	1.15153
46	1.61284	1.86203	2.09877	6.61113	1.55280	1.77643	15.77025	1.15838
47	1.61610	1.86590	2.10367	6.65847	1.58105	1.80875	16.05716	1.16589
48	1.61943	1.86991	2.10874	6.70582	1.61211	1.84427	16.37251	1.17430
49	1.67928	1.94462	2.19534	6.75316	1.64610	1.88317	16.71782	1.21254
50	1.73913	2.01934	2.28195	6.80051	1.68321	1.92561	17.09464	1.25078
51	1.79898	2.09406	2.36856	6.84786	1.72359	1.97181	17.50476	1.28901
52	1.85884	2.16878	2.45517	6.89520	1.76746	2.02199	17.95026	1.32725
53	1.91869	2.24349	2.54177	6.94255	1.81501	2.07640	18.43320	1.36549
54	1.97854	2.31821	2.62838	6.98989	1.86649	2.13529	18.95602	1.40373
55	2.03839	2.39293	2.71499	7.03724	1.92216	2.19898	19.52144	1.44196
56	2.09825	2.46765	2.80159	7.08458	1.98231	2.26779	20.13223	1.48020
57	2.15810	2.54237	2.88820	7.13193	2.04724	2.34207	20.79169	1.51844
58	2.21795	2.61708	2.97481	7.17927	2.11730	2.42222	21.50319	1.55668
59	2.27780	2.69180	3.06142	7.22662	2.19287	2.50867	22.27071	1.59492
60	2.33766	2.76652	3.14803	7.27396	2.27437	2.60190	23.09837	1.63315
61	2.39751	2.84124	3.23464	7.32131	2.36225	2.70244	23.99084	1.67139
62	2.45736	2.91596	3.32124	7.36865	2.45701	2.81085	24.95317	1.70963
63	2.51721	2.99068	3.40785	7.41600	2.55919	2.92775	25.99104	1.74787
64	2.57707	3.06539	3.49446	7.46335	2.66943	3.05386	27.11052	1.78610
65	2.63692	3.14011	3.58106	7.51069	2.78836	3.18992	28.31841	1.82434

Orange 1996 Time Period 2 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	10.61214	11.80696	14.42617	26.86845	1.63085	2.30749	6.08451	17.48485
4	7.65882	8.60585	10.42613	21.13339	1.54834	2.19074	5.77666	15.06018
5	6.03303	6.81637	8.19116	17.89609	1.47129	2.08173	5.48922	13.26435
6	5.01011	5.67824	6.77034	15.71734	1.39931	1.97989	5.22067	11.90885
7	4.30960	4.89354	5.79181	14.09156	1.33203	1.88468	4.96963	10.86804
8	3.88673	4.39427	5.16884	12.99887	1.26909	1.79563	4.73483	10.05628
9	3.55879	4.00823	4.68875	12.06397	1.21020	1.71230	4.51509	9.41406
10	3.28884	3.69468	4.30070	11.23477	1.15505	1.63427	4.30934	8.89920
11	3.06110	3.43405	3.97999	10.49428	1.10339	1.56117	4.11659	8.48131
12	2.86504	3.21310	3.70984	9.82955	1.05496	1.49266	3.93592	8.13810
13	2.69332	3.02258	3.47848	9.23028	1.00955	1.42840	3.76650	7.85299
14	2.54070	2.85585	3.27744	8.68806	0.96694	1.36812	3.60753	7.61343
15	2.40334	2.70800	3.10047	8.19594	0.92695	1.31153	3.45833	7.40987
16	2.27834	2.57533	2.94287	7.74803	0.88940	1.25840	3.31821	7.23491
17	2.16350	2.45504	2.80104	7.33934	0.85411	1.20847	3.18657	7.08277
18	2.05710	2.34494	2.67221	6.96554	0.82095	1.16155	3.06284	6.94890
19	1.95778	2.24332	2.55417	6.62289	0.78977	1.11744	2.94652	6.82971
20	1.86922	2.15908	2.45623	6.31722	0.76044	1.07595	2.83711	6.72236
21	1.80047	2.08411	2.36777	6.05020	0.73285	1.03691	2.73416	6.62460
22	1.73736	2.01525	2.28677	5.80571	0.70688	1.00016	2.63727	6.53463
23	1.67914	1.95168	2.21221	5.58153	0.68243	0.96557	2.54606	6.45106
24	1.62521	1.89272	2.14327	5.37570	0.65941	0.93299	2.46016	6.37281
25	1.57504	1.83786	2.07925	5.18648	0.63772	0.90231	2.37925	6.29905
26	1.52822	1.78663	2.01961	5.01232	0.61729	0.87340	2.30303	6.22916
27	1.48436	1.73866	1.96387	4.85183	0.59804	0.84617	2.23121	6.16268
28	1.44317	1.69367	1.91165	4.70379	0.57990	0.82050	2.16354	6.09931
29	1.40438	1.65137	1.86263	4.56709	0.56281	0.79632	2.09976	6.03886
30	1.36775	1.61157	1.81653	4.44074	0.54670	0.77352	2.03966	5.98120
31	1.33309	1.57408	1.77312	4.32386	0.53152	0.75205	1.98303	5.92629
32	1.30022	1.53872	1.73220	4.21564	0.51722	0.73181	1.92966	5.87413
33	1.26899	1.50537	1.69359	4.11538	0.50374	0.71274	1.87938	5.82476
34	1.23927	1.47389	1.65714	4.02243	0.49105	0.69478	1.83203	5.77821
35	1.21092	1.44416	1.62271	3.93620	0.47910	0.67787	1.78744	5.73458
36	1.18385	1.41609	1.59018	3.85618	0.46785	0.66195	1.74547	5.69390
37	1.15796	1.38957	1.55942	3.78188	0.45726	0.64698	1.70599	5.65622
38	1.13317	1.36451	1.53034	3.71289	0.44731	0.63290	1.66887	5.62159
39	1.10938	1.34082	1.50284	3.64882	0.43797	0.61968	1.63399	5.59003
40	1.08654	1.31841	1.47682	3.58932	0.42919	0.60726	1.60125	5.56151
41	1.06457	1.29721	1.45218	3.53408	0.42096	0.59562	1.57055	5.53603
42	1.04342	1.27714	1.42884	3.48281	0.41325	0.58471	1.54179	5.51348
43	1.02302	1.25811	1.40671	3.43525	0.40604	0.57451	1.51489	5.49370
44	1.00332	1.24004	1.38569	3.39117	0.39931	0.56498	1.48978	5.47660
45	0.98427	1.22284	1.36570	3.35037	0.39304	0.55610	1.46636	5.46194
46	0.96583	1.20642	1.34664	3.31266	0.38720	0.54785	1.44459	5.44943
47	0.94795	1.19069	1.32841	3.27787	0.38179	0.54019	1.42439	5.43870
48	0.93098	1.17563	1.31094	3.24570	0.37678	0.53310	1.40571	5.42933
49	0.92791	1.17239	1.30667	3.21508	0.37217	0.52658	1.38850	5.42933
50	0.92501	1.16934	1.30266	3.18738	0.36793	0.52059	1.37271	5.42933
51	0.92227	1.16646	1.29887	3.16248	0.36407	0.51512	1.35829	5.42933
52	0.91968	1.16373	1.29530	3.14023	0.36056	0.51016	1.34520	5.42933
53	0.91723	1.16115	1.29192	3.12054	0.35740	0.50569	1.33342	5.42933
54	0.91491	1.15871	1.28872	3.10331	0.35458	0.50170	1.32290	5.42933
55	0.91271	1.15640	1.28568	3.08846	0.35210	0.49818	1.31362	5.42933
56	0.94211	1.20148	1.34000	3.07592	0.34993	0.49512	1.30555	5.54882
57	0.97161	1.24668	1.39446	3.06564	0.34809	0.49251	1.29868	5.66832
58	1.00120	1.29197	1.44906	3.05757	0.34656	0.49035	1.29297	5.78782
59	1.03089	1.33737	1.50379	3.05170	0.34534	0.48863	1.28843	5.90732
60	1.06066	1.38285	1.55863	3.04798	0.34443	0.48734	1.28503	6.02682
61	1.09052	1.42842	1.61358	3.04642	0.34383	0.48648	1.28277	6.14632
62	1.12044	1.47406	1.66864	3.04702	0.34353	0.48605	1.28164	6.26582
63	1.15044	1.51978	1.72380	3.04979	0.34353	0.48605	1.28165	6.38532
64	1.18050	1.56557	1.77904	3.05475	0.34383	0.48648	1.28277	6.50482
65	1.21063	1.61143	1.83438	3.06194	0.34443	0.48734	1.28503	6.62432

Orange 1996 Time Period 2 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	85.33862	110.29362	136.52589	288.52344	5.34957	6.15454	41.37212	189.88757
4	65.54811	84.87019	104.92204	263.61157	4.93024	5.67210	38.12904	151.43947
5	53.57217	69.21510	85.12196	241.38141	4.55205	5.23701	35.20430	123.68912
6	45.55121	58.64006	71.60277	221.51256	4.21052	4.84409	32.56302	103.21158
7	39.81104	51.05156	61.84073	203.72664	3.90172	4.48882	30.17480	87.79254
8	35.50545	45.36548	54.50191	187.78149	3.62215	4.16718	28.01268	75.96541
9	32.16010	40.96220	48.81125	173.46555	3.36874	3.87564	26.05284	66.73746
10	29.48834	37.46167	44.28716	160.59389	3.13876	3.61106	24.27428	59.42204
11	27.30669	34.61792	40.61514	149.00494	2.92981	3.37067	22.65836	53.53583
12	25.49240	32.26495	37.58154	138.55672	2.73975	3.15201	21.18849	48.73187
13	23.96021	30.28679	35.03648	129.12488	2.56669	2.95291	19.85011	44.75746
14	22.64903	28.60004	32.87207	120.59993	2.40894	2.77142	18.63011	41.42548
15	21.51410	27.14325	31.00880	112.88617	2.26501	2.60583	17.51695	38.59578
16	20.52177	25.87035	29.38716	105.89821	2.13355	2.45459	16.50032	36.16190
17	19.64633	24.74612	27.96159	99.56189	2.01338	2.31634	15.57101	34.04236
18	18.86787	23.74333	26.69693	93.81076	1.90345	2.18986	14.72080	32.17430
19	18.17062	22.84073	25.56563	88.58644	1.80279	2.07406	13.94234	30.50876
20	17.43301	22.05762	24.61864	83.83743	1.71057	1.96796	13.22913	29.00766
21	16.65552	21.17197	23.61227	79.51765	1.62602	1.87069	12.57524	27.64119
22	15.94738	20.35869	22.69373	75.58659	1.54847	1.78147	11.97547	26.38632
23	15.29947	19.60789	21.85086	72.00812	1.47730	1.69959	11.42508	25.22485
24	14.70422	18.91168	21.07385	68.75011	1.41197	1.62443	10.91983	24.14290
25	14.15533	18.26376	20.35471	65.78412	1.35199	1.55542	10.45594	23.12994
26	13.64753	17.65910	19.68680	63.08475	1.29691	1.49206	10.03000	22.17780
27	13.17637	17.09363	19.06479	60.62938	1.24635	1.43389	9.63893	21.28044
28	12.73807	16.56403	18.48416	58.39780	1.19993	1.38049	9.27999	20.43335
29	12.32939	16.06758	17.94125	56.37233	1.15736	1.33150	8.95069	19.63338
30	11.94756	15.60200	17.43288	54.53694	1.11832	1.28660	8.64880	18.87823
31	11.59016	15.16540	16.95644	52.87744	1.08257	1.24547	8.37231	18.16605
32	11.25507	14.75606	16.50961	51.38144	1.04987	1.20785	8.11943	17.49556
33	10.94044	14.37248	16.09045	50.03773	1.02002	1.17350	7.88854	16.86621
34	10.64464	14.01334	15.69716	48.83649	0.99282	1.14220	7.67815	16.27675
35	10.36619	13.67738	15.32821	47.76901	0.96810	1.11377	7.48700	15.72689
36	10.10380	13.36340	14.98214	46.82779	0.94572	1.08802	7.31392	15.21537
37	9.85629	13.07031	14.65766	46.00621	0.92554	1.06480	7.15785	14.74200
38	9.62258	12.79702	14.35353	45.29865	0.90744	1.04398	7.01786	14.30529
39	9.40171	12.54248	14.06855	44.70015	0.89131	1.02543	6.89316	13.90426
40	9.19278	12.30565	13.80163	44.20671	0.87707	1.00904	6.78300	13.53767
41	8.99497	12.08550	13.55170	43.81503	0.86462	0.99473	6.68676	13.20402
42	8.80750	11.88094	13.31757	43.52245	0.85391	0.98240	6.60389	12.90123
43	8.62966	11.69086	13.09824	43.32704	0.84486	0.97199	6.53394	12.62742
44	8.46076	11.51410	12.89255	43.22752	0.83744	0.96345	6.47649	12.37984
45	8.30015	11.34934	12.69939	43.22321	0.83159	0.95672	6.43126	12.15594
46	8.14715	11.19508	12.51748	43.31404	0.82728	0.95176	6.39796	11.95245
47	8.00113	11.04970	12.34550	43.50069	0.82450	0.94856	6.37643	11.76541
48	7.86142	10.91135	12.18210	43.78436	0.82322	0.94709	6.36656	11.59086
49	7.86142	10.91135	12.18210	44.16698	0.82344	0.94735	6.36828	11.59086
50	7.86142	10.91135	12.18210	44.65103	0.82517	0.94933	6.38160	11.59086
51	7.86142	10.91135	12.18210	45.23976	0.82840	0.95305	6.40660	11.59086
52	7.86142	10.91135	12.18210	45.93729	0.83316	0.95853	6.44342	11.59086
53	7.86142	10.91135	12.18210	46.74825	0.83947	0.96579	6.49225	11.59086
54	7.86142	10.91135	12.18210	47.67836	0.84738	0.97488	6.55337	11.59086
55	7.86142	10.91135	12.18210	48.73401	0.85691	0.98585	6.62712	11.59086
56	8.99865	12.80042	14.39952	49.92278	0.86813	0.99876	6.71390	14.38227
57	10.13589	14.68949	16.61693	51.25311	0.88110	1.01368	6.81421	17.17369
58	11.27312	16.57855	18.83432	52.73486	0.89590	1.03070	6.92861	19.96509
59	12.41035	18.46759	21.05174	54.37895	0.91260	1.04992	7.05777	22.75648
60	13.54758	20.35666	23.26918	56.19780	0.93130	1.07144	7.20243	25.54788
61	14.68481	22.24570	25.48657	58.20535	0.95212	1.09539	7.36346	28.33928
62	15.82203	24.13475	27.70403	60.41742	0.97518	1.12192	7.54179	31.13068
63	16.95924	26.02382	29.92143	62.85165	1.00062	1.15118	7.73851	33.92212
64	18.09648	27.91290	32.13885	65.52803	1.02859	1.18336	7.95483	36.71355
65	19.23372	29.80200	34.35628	68.46854	1.05927	1.21866	8.19210	39.50494

Orange 1996 Time Period 2 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	2.07552	2.30224	2.51461	4.36142	2.74037	3.13502	27.83104	0.82775
4	1.90436	2.11434	2.31724	4.40655	2.62495	3.00298	26.65887	0.79173
5	1.80093	2.00098	2.19902	4.45168	2.51797	2.88059	25.57236	0.76184
6	1.73146	1.92520	2.12052	4.49682	2.41878	2.76712	24.56497	0.73761
7	1.68149	1.87111	2.06482	4.54195	2.32680	2.66189	23.63083	0.71858
8	1.64377	1.83073	2.02345	4.58708	2.24149	2.56430	22.76448	0.70433
9	1.61426	1.79963	1.99170	4.63221	2.16238	2.47380	21.96109	0.69442
10	1.59056	1.77511	1.96671	4.67735	2.08903	2.38988	21.21614	0.68845
11	1.57109	1.75546	1.94667	4.72248	2.02104	2.31210	20.52560	0.68605
12	1.55485	1.73950	1.93036	4.76761	1.95804	2.24002	19.88574	0.68683
13	1.54109	1.72643	1.91694	4.81274	1.89969	2.17327	19.29320	0.69044
14	1.52932	1.71565	1.90578	4.85788	1.84571	2.11151	18.74493	0.69655
15	1.51914	1.70672	1.89645	4.90301	1.79580	2.05442	18.23810	0.70483
16	1.51027	1.69929	1.88858	4.94814	1.74973	2.00172	17.77022	0.71498
17	1.50249	1.69310	1.88192	4.99327	1.70726	1.95313	17.33893	0.72671
18	1.49562	1.68795	1.87625	5.03841	1.66819	1.90844	16.94214	0.73974
19	1.48953	1.68365	1.87142	5.08354	1.63234	1.86741	16.57796	0.75383
20	1.49061	1.68222	1.86972	5.12867	1.59952	1.82987	16.24466	0.76873
21	1.49925	1.69355	1.88220	5.17380	1.56958	1.79563	15.94070	0.78422
22	1.50716	1.70409	1.89371	5.21893	1.54240	1.76453	15.66463	0.80010
23	1.51443	1.71390	1.90438	5.26407	1.51784	1.73643	15.41523	0.81617
24	1.52116	1.72308	1.91428	5.30919	1.49580	1.71122	15.19134	0.83226
25	1.52740	1.73168	1.92351	5.35433	1.47617	1.68876	14.99198	0.84822
26	1.53322	1.73974	1.93213	5.39946	1.45887	1.66897	14.81627	0.86391
27	1.53866	1.74732	1.94021	5.44460	1.44382	1.65175	14.66341	0.87920
28	1.54377	1.75444	1.94778	5.48973	1.43095	1.63703	14.53276	0.89398
29	1.54858	1.76114	1.95491	5.53486	1.42022	1.62475	14.42374	0.90817
30	1.55312	1.76744	1.96162	5.57999	1.41157	1.61485	14.33588	0.92169
31	1.55743	1.77338	1.96796	5.62513	1.40496	1.60730	14.26879	0.93449
32	1.56152	1.77898	1.97396	5.67026	1.40038	1.60205	14.22222	0.94652
33	1.56543	1.78427	1.97964	5.71539	1.39779	1.59909	14.19593	0.95775
34	1.56916	1.78926	1.98505	5.76052	1.39719	1.59840	14.18982	0.96819
35	1.57274	1.79398	1.99022	5.80566	1.39857	1.59998	14.20389	0.97783
36	1.57619	1.79846	1.99516	5.85079	1.40195	1.60384	14.23815	0.98671
37	1.57952	1.80271	1.99990	5.89592	1.40733	1.61000	14.29280	0.99486
38	1.58275	1.80676	2.00448	5.94105	1.41473	1.61847	14.36803	1.00235
39	1.58589	1.81063	2.00892	5.98618	1.42420	1.62930	14.46417	1.00924
40	1.58896	1.81436	2.01324	6.03132	1.43577	1.64254	14.58167	1.01563
41	1.59197	1.81797	2.01748	6.07645	1.44949	1.65824	14.72099	1.02162
42	1.59494	1.82148	2.02166	6.12158	1.46542	1.67646	14.88278	1.02735
43	1.59787	1.82493	2.02581	6.16671	1.48363	1.69729	15.06774	1.03294
44	1.60079	1.82835	2.02996	6.21185	1.50420	1.72083	15.27664	1.03857
45	1.60370	1.83177	2.03413	6.25698	1.52722	1.74716	15.51046	1.04439
46	1.60662	1.83522	2.03836	6.30211	1.55280	1.77643	15.77025	1.05061
47	1.60956	1.83874	2.04268	6.34724	1.58105	1.80875	16.05716	1.05741
48	1.61253	1.84237	2.04713	6.39237	1.61211	1.84427	16.37251	1.06504
49	1.61719	1.91585	2.13083	6.43751	1.64610	1.88317	16.71782	1.09972
50	1.73104	1.98932	2.21454	6.48264	1.68321	1.92561	17.09464	1.13440
51	1.79029	2.06280	2.29825	6.52777	1.72359	1.97181	17.50476	1.16908
52	1.84955	2.13627	2.38196	6.57291	1.76746	2.02199	17.95026	1.20376
53	1.90880	2.20975	2.46566	6.61804	1.81501	2.07640	18.43320	1.23844
54	1.96806	2.28322	2.54937	6.66317	1.86649	2.13529	18.95602	1.27313
55	2.02731	2.35670	2.63308	6.70830	1.92216	2.19898	19.52144	1.30781
56	2.08656	2.43017	2.71679	6.75343	1.98231	2.26779	20.13223	1.34249
57	2.14582	2.50365	2.80049	6.79857	2.04724	2.34207	20.79169	1.37717
58	2.20507	2.57712	2.88420	6.84369	2.11730	2.42222	21.50319	1.41185
59	2.26433	2.65060	2.96791	6.88883	2.19287	2.50867	22.27071	1.44653
60	2.32358	2.72407	3.05162	6.93396	2.27437	2.60190	23.09837	1.48121
61	2.38283	2.79755	3.13533	6.97910	2.36225	2.70244	23.99084	1.51589
62	2.44209	2.87102	3.21903	7.02423	2.45701	2.81085	24.95317	1.55057
63	2.50134	2.94450	3.30274	7.06936	2.55919	2.92775	25.99104	1.58525
64	2.56059	3.01797	3.38645	7.11449	2.66943	3.05386	27.11052	1.61993
65	2.61985	3.09145	3.47016	7.15963	2.78836	3.18992	28.31841	1.65460

Orange 1996 Time Period 3 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	11.11748	12.17919	14.88906	28.32481	1.63085	2.30749	6.08451	17.71013
4	7.98645	8.83212	10.69792	22.07028	1.54834	2.19074	5.77666	15.28720
5	6.27124	6.97283	8.37334	18.58247	1.47129	2.08173	5.48922	13.49264
6	5.19589	5.79556	6.90320	16.26112	1.39931	1.97989	5.22067	12.13811
7	4.46146	4.98655	5.89455	14.54474	1.33203	1.88468	4.96963	11.09804
8	4.02410	4.47691	5.25955	13.41195	1.26909	1.79563	4.73483	10.28686
9	3.68486	4.08366	4.77116	12.44652	1.21020	1.71230	4.51509	9.64510
10	3.40492	3.76454	4.37667	11.59139	1.15505	1.63427	4.30934	9.13061
11	3.16815	3.49952	4.05083	10.82848	1.10339	1.56117	4.11659	8.71302
12	2.96378	3.27510	3.77656	10.14404	1.05496	1.49266	3.93592	8.37006
13	2.78430	3.08179	3.54185	9.52723	1.00955	1.42840	3.76650	8.08514
14	2.62435	2.91281	3.33807	8.96924	0.96694	1.36812	3.60753	7.84576
15	2.48001	2.76314	3.15884	8.46280	0.92695	1.31153	3.45833	7.64235
16	2.34831	2.62900	2.99938	8.00180	0.88940	1.25840	3.31821	7.46751
17	2.22699	2.50751	2.85601	7.58106	0.85411	1.20847	3.18657	7.31548
18	2.11431	2.39644	2.72591	7.19611	0.82095	1.16155	3.06284	7.18170
19	2.00888	2.29404	2.60683	6.84308	0.78977	1.11744	2.94652	7.06260
20	1.91604	2.20880	2.50770	6.52888	0.76044	1.07595	2.83711	6.95532
21	1.84570	2.13216	2.41742	6.25569	0.73285	1.03691	2.73416	6.85763
22	1.78109	2.06175	2.33475	6.00554	0.70688	1.00016	2.63727	6.76773
23	1.72147	1.99672	2.25864	5.77616	0.68243	0.96557	2.54606	6.68422
24	1.66620	1.93641	2.18825	5.56554	0.65941	0.93299	2.46016	6.60603
25	1.61478	1.88026	2.12289	5.37190	0.63772	0.90231	2.37925	6.53232
26	1.56675	1.82781	2.06199	5.19363	0.61729	0.87340	2.30303	6.46247
27	1.52175	1.77870	2.00506	5.02933	0.59804	0.84617	2.23121	6.39605
28	1.47946	1.73261	1.95172	4.87774	0.57990	0.82050	2.16354	6.33272
29	1.43960	1.68927	1.90164	4.73773	0.56281	0.79632	2.09976	6.27232
30	1.40196	1.64848	1.85453	4.60828	0.54670	0.77352	2.03966	6.21469
31	1.36631	1.61004	1.81016	4.48850	0.53152	0.75205	1.98303	6.15983
32	1.33249	1.57378	1.76832	4.37757	0.51722	0.73181	1.92966	6.10769
33	1.30034	1.53956	1.72884	4.27475	0.50374	0.71274	1.87938	6.05837
34	1.26972	1.50725	1.69155	4.17939	0.49105	0.69478	1.83203	6.01185
35	1.24051	1.47673	1.65632	4.09089	0.47910	0.67787	1.78744	5.96824
36	1.21259	1.44790	1.62301	4.00873	0.46785	0.66195	1.74547	5.92760
37	1.18587	1.42065	1.59151	3.93241	0.45726	0.64698	1.70599	5.88995
38	1.16027	1.39489	1.56172	3.86150	0.44731	0.63290	1.66887	5.85534
39	1.13570	1.37052	1.53352	3.79560	0.43797	0.61968	1.63399	5.82380
40	1.11209	1.34747	1.50682	3.73437	0.42919	0.60726	1.60125	5.79530
41	1.08936	1.32565	1.48153	3.67749	0.42096	0.59562	1.57055	5.76984
42	1.06747	1.30498	1.45755	3.62465	0.41325	0.58471	1.54179	5.74730
43	1.04634	1.28537	1.43480	3.57560	0.40604	0.57451	1.51489	5.72754
44	1.02593	1.26674	1.41319	3.53011	0.39931	0.56498	1.48978	5.71046
45	1.00618	1.24900	1.39261	3.48796	0.39304	0.55610	1.46636	5.69580
46	0.98705	1.23205	1.37297	3.44895	0.38720	0.54785	1.44459	5.68330
47	0.96848	1.21581	1.35419	3.41292	0.38179	0.54019	1.42439	5.67258
48	0.95088	1.20026	1.33617	3.37954	0.37678	0.53310	1.40571	5.66321
49	0.94749	1.19670	1.33147	3.34754	0.37217	0.52658	1.38850	5.66321
50	0.94430	1.19333	1.32704	3.31856	0.36793	0.52059	1.37271	5.66321
51	0.94129	1.19016	1.32286	3.29246	0.36407	0.51512	1.35829	5.66321
52	0.93845	1.18716	1.31891	3.26910	0.36056	0.51016	1.34520	5.66321
53	0.93576	1.18433	1.31518	3.24837	0.35740	0.50569	1.33342	5.66321
54	0.93321	1.18164	1.31165	3.23017	0.35458	0.50170	1.32290	5.66321
55	0.93079	1.17910	1.30831	3.21442	0.35210	0.49818	1.31362	5.66321
56	0.96018	1.22444	1.36265	3.20105	0.34993	0.49512	1.30555	5.78263
57	0.98969	1.26991	1.41715	3.19000	0.34809	0.49251	1.29868	5.90204
58	1.01930	1.31549	1.47180	3.18122	0.34656	0.49035	1.29297	6.02145
59	1.04902	1.36117	1.52659	3.17468	0.34534	0.48863	1.28843	6.14087
60	1.07882	1.40696	1.58151	3.17036	0.34443	0.48734	1.28503	6.26028
61	1.10872	1.45283	1.63656	3.16825	0.34383	0.48648	1.28277	6.37969
62	1.13869	1.49879	1.69172	3.16834	0.34353	0.48605	1.28164	6.49911
63	1.16875	1.54484	1.74699	3.17065	0.34353	0.48605	1.28165	6.61852
64	1.19888	1.59096	1.80236	3.17520	0.34383	0.48648	1.28277	6.73794
65	1.22907	1.63715	1.85782	3.18203	0.34443	0.48734	1.28503	6.85735

Orange 1996 Time Period 3 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	86.31543	112.03168	138.48439	296.72607	5.34957	6.15454	41.37212	194.60548
4	66.28545	86.20476	106.41545	271.10596	4.93024	5.67210	38.12904	155.20212
5	54.16214	70.29062	86.31676	248.24379	4.55205	5.23701	35.20430	126.76227
6	46.04164	59.53716	72.59116	227.81021	4.21052	4.84409	32.56302	105.77592
7	40.23000	51.81995	62.67934	209.51865	3.90172	4.48882	30.17480	89.97379
8	35.87083	46.03767	55.22784	193.12019	3.62215	4.16718	28.01268	77.85281
9	32.48396	41.56053	49.45007	178.39722	3.36874	3.87564	26.05284	68.39557
10	29.77919	38.00192	44.85698	165.15967	3.13876	3.61106	24.27428	60.89841
11	27.57071	35.11156	41.12924	153.24123	2.92981	3.37067	22.65836	54.86598
12	25.73419	32.72050	38.04984	142.49588	2.73975	3.15201	21.18849	49.94267
13	24.18329	30.71069	35.46652	132.79597	2.56669	2.95291	19.85011	45.86946
14	22.85619	28.99718	33.26973	124.02864	2.40894	2.77142	18.63011	42.45474
15	21.70749	27.51740	31.37871	116.09555	2.26501	2.60583	17.51695	39.55469
16	20.70313	26.22444	29.73296	108.90894	2.13355	2.45459	16.50032	37.06035
17	19.81708	25.08243	28.28624	102.39247	2.01338	2.31634	15.57101	34.88818
18	19.02914	24.06364	27.00284	96.47783	1.90345	2.18986	14.72080	32.97368
19	18.32339	23.14645	25.85475	91.10495	1.80279	2.07406	13.94234	31.26677
20	17.57829	22.35271	24.89621	86.22095	1.71057	1.96796	13.22913	29.72838
21	16.79422	21.45659	23.87872	81.77838	1.62602	1.87069	12.57524	28.32794
22	16.08003	20.63339	22.94997	77.73553	1.54847	1.78147	11.97547	27.04189
23	15.42655	19.87311	22.09769	74.05530	1.47730	1.69959	11.42508	25.85158
24	14.82613	19.16783	21.31194	70.70471	1.41197	1.62443	10.91983	24.74275
25	14.27242	18.51122	20.58461	67.65440	1.35199	1.55542	10.45594	23.70462
26	13.76012	17.89821	19.90907	64.87828	1.29691	1.49206	10.03000	22.72881
27	13.28475	17.32472	19.27991	62.35310	1.24635	1.43389	9.63893	21.80917
28	12.84250	16.78746	18.69255	60.05804	1.19993	1.38049	9.27999	20.94101
29	12.43013	16.28372	18.14331	57.97505	1.15736	1.33150	8.95069	20.12117
30	12.04482	15.81123	17.62900	56.08745	1.11832	1.28660	8.64880	19.34727
31	11.68416	15.36812	17.14697	54.38077	1.08257	1.24547	8.37231	18.61740
32	11.34601	14.95267	16.69493	52.84225	1.04987	1.20785	8.11943	17.93024
33	11.02852	14.56340	16.27087	51.46033	1.02002	1.17350	7.88854	17.28528
34	10.73004	14.19899	15.87300	50.22491	0.99282	1.14220	7.67815	16.68115
35	10.44910	13.85820	15.49979	49.12714	0.96810	1.11377	7.48700	16.11763
36	10.18437	13.53982	15.14975	48.15913	0.94572	1.08802	7.31392	15.59341
37	9.93467	13.24275	14.82159	47.31419	0.92554	1.06480	7.15785	15.10828
38	9.69893	12.96591	14.51405	46.58653	0.90744	1.04398	7.01786	14.66071
39	9.47617	12.70822	14.22593	45.97098	0.89131	1.02543	6.89316	14.24973
40	9.26548	12.46864	13.95613	45.46349	0.87707	1.00904	6.78300	13.87402
41	9.06604	12.24612	13.70354	45.06070	0.86462	0.99473	6.68676	13.53209
42	8.87706	12.03954	13.46700	44.75978	0.85391	0.98240	6.60389	13.22177
43	8.69782	11.84778	13.24545	44.55884	0.84486	0.97199	6.53394	12.94116
44	8.52763	11.66964	13.03774	44.45648	0.83744	0.96345	6.47649	12.68743
45	8.36581	11.50376	12.84273	44.45206	0.83159	0.95672	6.43126	12.45796
46	8.21168	11.34858	12.65912	44.54546	0.82728	0.95176	6.39796	12.24942
47	8.06460	11.20244	12.48557	44.73743	0.82450	0.94856	6.37643	12.05773
48	7.92389	11.06339	12.32069	45.02919	0.82322	0.94709	6.36656	11.87885
49	7.92389	11.06339	12.32069	45.42265	0.82344	0.94735	6.36828	11.87885
50	7.92389	11.06339	12.32069	45.92044	0.82517	0.94933	6.38160	11.87885
51	7.92389	11.06339	12.32069	46.52597	0.82840	0.95305	6.40660	11.87885
52	7.92389	11.06339	12.32069	47.24333	0.83316	0.95853	6.44342	11.87885
53	7.92389	11.06339	12.32069	48.07730	0.83947	0.96579	6.49225	11.87885
54	7.92389	11.06339	12.32069	49.03387	0.84738	0.97488	6.55337	11.87885
55	7.92389	11.06339	12.32069	50.11952	0.85691	0.98585	6.62712	11.87885
56	9.07594	12.98925	14.57162	51.34209	0.86813	0.99876	6.71390	14.73961
57	10.22800	14.91510	16.82253	52.71027	0.88110	1.01368	6.81421	17.60037
58	11.38006	16.84097	19.07344	54.23412	0.89590	1.03070	6.92861	20.46112
59	12.53212	18.76682	21.32436	55.92499	0.91260	1.04992	7.05777	23.32188
60	13.68418	20.69267	23.57530	57.79546	0.93130	1.07144	7.20243	26.18262
61	14.83623	22.61852	25.82620	59.86015	0.95212	1.09539	7.36346	29.04340
62	15.98828	24.54436	28.07715	62.13513	0.97518	1.12192	7.54179	31.90413
63	17.14034	26.47025	30.32808	64.63857	1.00062	1.15118	7.73851	34.76495
64	18.29237	28.39610	32.57901	67.39104	1.02859	1.18336	7.95483	37.62569
65	19.44444	30.32199	34.82994	70.41516	1.05927	1.21866	8.19210	40.48648

Orange 1996 Time Period 3 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	2.07558	2.30092	2.51095	4.34160	2.74037	3.13502	27.83104	0.81914
4	1.90423	2.11294	2.31349	4.38653	2.62495	3.00298	26.65887	0.78349
5	1.80070	1.99957	2.19522	4.43146	2.51797	2.88059	25.57236	0.75391
6	1.73118	1.92377	2.11668	4.47638	2.41878	2.76712	24.56497	0.72993
7	1.68119	1.86967	2.06095	4.52131	2.32680	2.66189	23.63083	0.71110
8	1.64346	1.82929	2.01955	4.56624	2.24149	2.56430	22.76448	0.69700
9	1.61395	1.79818	1.98775	4.61117	2.16238	2.47380	21.96109	0.68719
10	1.59024	1.77366	1.96273	4.65609	2.08903	2.38988	21.21614	0.68129
11	1.57079	1.75400	1.94266	4.70102	2.02104	2.31210	20.52560	0.67891
12	1.55455	1.73803	1.92631	4.74595	1.95804	2.24002	19.88574	0.67968
13	1.54080	1.72495	1.91285	4.79087	1.89969	2.17327	19.29320	0.68326
14	1.52904	1.71415	1.90166	4.83580	1.84571	2.11151	18.74493	0.68930
15	1.51887	1.70520	1.89228	4.88073	1.79580	2.05442	18.23810	0.69750
16	1.51000	1.69775	1.88437	4.92566	1.74973	2.00172	17.77022	0.70754
17	1.50223	1.69155	1.87766	4.97059	1.70726	1.95313	17.33893	0.71914
18	1.49537	1.68637	1.87196	5.01551	1.66819	1.90844	16.94214	0.73204
19	1.48928	1.68205	1.86708	5.06044	1.63234	1.86741	16.57796	0.74599
20	1.49037	1.68058	1.86532	5.10537	1.59952	1.82987	16.24466	0.76073
21	1.49903	1.69188	1.87775	5.15029	1.56958	1.79563	15.94070	0.77606
22	1.50696	1.70238	1.88921	5.19522	1.54240	1.76453	15.66463	0.79177
23	1.51425	1.71217	1.89983	5.24015	1.51784	1.73643	15.41523	0.80768
24	1.52099	1.72132	1.90968	5.28507	1.49580	1.71122	15.19134	0.82360
25	1.52725	1.72988	1.91887	5.33000	1.47617	1.68876	14.99198	0.83940
26	1.53308	1.73792	1.92744	5.37493	1.45887	1.66897	14.81627	0.85492
27	1.53853	1.74546	1.93547	5.41986	1.44382	1.65175	14.66341	0.87005
28	1.54364	1.75255	1.94301	5.46478	1.43095	1.63703	14.53276	0.88468
29	1.54846	1.75922	1.95009	5.50971	1.42022	1.62475	14.42374	0.89872
30	1.55301	1.76550	1.95676	5.55464	1.41157	1.61485	14.33588	0.91210
31	1.55731	1.77142	1.96306	5.59957	1.40496	1.60730	14.26879	0.92477
32	1.56140	1.77699	1.96902	5.64449	1.40038	1.60205	14.22222	0.93667
33	1.56530	1.78225	1.97467	5.68942	1.39779	1.59909	14.19593	0.94779
34	1.56903	1.78722	1.98005	5.73435	1.39719	1.59840	14.18982	0.95811
35	1.57261	1.79191	1.98517	5.77927	1.39857	1.59998	14.20389	0.96766
36	1.57605	1.79637	1.99008	5.82420	1.40195	1.60384	14.23815	0.97644
37	1.57938	1.80059	1.99479	5.86913	1.40733	1.61000	14.29280	0.98451
38	1.58259	1.80462	1.99933	5.91405	1.41473	1.61847	14.36803	0.99192
39	1.58572	1.80848	2.00373	5.95898	1.42420	1.62930	14.46417	0.99874
40	1.58878	1.81218	2.00802	6.00391	1.43577	1.64254	14.58167	1.00506
41	1.59177	1.81577	2.01222	6.04884	1.44949	1.65824	14.72099	1.01099
42	1.59472	1.81925	2.01636	6.09376	1.46542	1.67646	14.88278	1.01666
43	1.59764	1.82268	2.02047	6.13869	1.48363	1.69729	15.06774	1.02220
44	1.60053	1.82607	2.02457	6.18362	1.50420	1.72083	15.27664	1.02776
45	1.60341	1.82946	2.02870	6.22854	1.52722	1.74716	15.51046	1.03352
46	1.60630	1.83288	2.03288	6.27347	1.55280	1.77643	15.77025	1.03967
47	1.60921	1.83637	2.03715	6.31840	1.58105	1.80875	16.05716	1.04641
48	1.61216	1.83996	2.04153	6.36333	1.61211	1.84427	16.37251	1.05396
49	1.67137	1.91333	2.12497	6.40825	1.64610	1.88317	16.71782	1.08828
50	1.73057	1.98669	2.20842	6.45319	1.68321	1.92561	17.09464	1.12260
51	1.78978	2.06006	2.29186	6.49811	1.72359	1.97181	17.50476	1.15692
52	1.84899	2.13343	2.37530	6.54304	1.76746	2.02199	17.95026	1.19124
53	1.90820	2.20679	2.45874	6.58796	1.81501	2.07640	18.43320	1.22556
54	1.96741	2.28016	2.54218	6.63289	1.86649	2.13529	18.95602	1.25988
55	2.02661	2.35353	2.62563	6.67782	1.92216	2.19898	19.52144	1.29420
56	2.08582	2.42689	2.70907	6.72274	1.98231	2.26779	20.13223	1.32852
57	2.14503	2.50026	2.79251	6.76767	2.04724	2.34207	20.79169	1.36284
58	2.20424	2.57362	2.87596	6.81260	2.11730	2.42222	21.50319	1.39715
59	2.26345	2.64699	2.95940	6.85753	2.19287	2.50867	22.27071	1.43147
60	2.32265	2.72036	3.04284	6.90245	2.27437	2.60190	23.09837	1.46579
61	2.38186	2.79372	3.12629	6.94738	2.36225	2.70244	23.99084	1.50011
62	2.44107	2.86709	3.20973	6.99231	2.45701	2.81085	24.95317	1.53443
63	2.50028	2.94046	3.29317	7.03724	2.55919	2.92775	25.99104	1.56875
64	2.55949	3.01382	3.37661	7.08216	2.66943	3.05386	27.11052	1.60307
65	2.61869	3.08719	3.46006	7.12709	2.78836	3.18992	28.31841	1.63739

Orange 1996 Time Period 4 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	8.39175	10.08605	12.40440	19.87209	1.63085	2.30749	6.08451	15.67231
4	6.19572	7.51772	9.21092	16.32738	1.54834	2.19074	5.77666	13.22277
5	4.95349	6.03654	7.35608	14.16424	1.47129	2.08173	5.48922	11.40853
6	4.15678	5.07416	6.14540	12.61003	1.39931	1.97989	5.22067	10.03915
7	3.60336	4.40021	5.29583	11.39025	1.33203	1.88468	4.96963	8.98767
8	3.24495	3.95304	4.72723	10.49119	1.26909	1.79563	4.73483	8.16759
9	2.96704	3.60410	4.28514	9.70754	1.21020	1.71230	4.51509	7.51879
10	2.74085	3.31935	3.92675	9.00800	1.15505	1.63427	4.30934	6.99866
11	2.55231	3.08143	3.62961	8.38056	1.10339	1.56117	4.11659	6.57649
12	2.39201	2.87865	3.37848	7.81564	1.05496	1.49266	3.93592	6.22976
13	2.25342	2.70282	3.16263	7.30543	1.00955	1.42840	3.76650	5.94172
14	2.13187	2.54806	2.97435	6.84339	0.96694	1.36812	3.60753	5.69971
15	2.02392	2.41002	2.80793	6.42396	0.92695	1.31153	3.45833	5.49407
16	1.92700	2.28545	2.65909	6.04241	0.88940	1.25840	3.31821	5.31731
17	1.83914	2.17186	2.52454	5.69462	0.85411	1.20847	3.18657	5.16361
18	1.75881	2.06731	2.40174	5.37699	0.82095	1.16155	3.06284	5.02837
19	1.68480	1.97028	2.28871	5.08641	0.78977	1.11744	2.94652	4.90796
20	1.61429	1.89115	2.19590	4.82460	0.76044	1.07595	2.83711	4.79951
21	1.55312	1.82390	2.11514	4.59139	0.73285	1.03691	2.73416	4.70074
22	1.49711	1.76219	2.04120	4.37788	0.70688	1.00016	2.63727	4.60985
23	1.44558	1.70528	1.97313	4.18217	0.68243	0.96557	2.54606	4.52543
24	1.39797	1.65256	1.91018	4.00257	0.65941	0.93299	2.46016	4.44638
25	1.35381	1.60355	1.85173	3.83756	0.63772	0.90231	2.37925	4.37186
26	1.31271	1.55783	1.79726	3.68580	0.61729	0.87340	2.30303	4.30125
27	1.27432	1.51507	1.74636	3.54608	0.59804	0.84617	2.23121	4.23410
28	1.23838	1.47499	1.69866	3.41733	0.57990	0.82050	2.16354	4.17008
29	1.20462	1.43735	1.65390	3.29858	0.56281	0.79632	2.09976	4.10901
30	1.17285	1.40196	1.61181	3.18897	0.54670	0.77352	2.03966	4.05075
31	1.14287	1.36864	1.57218	3.08771	0.53152	0.75205	1.98303	3.99528
32	1.11453	1.33724	1.53485	2.99412	0.51722	0.73181	1.92966	3.94258
33	1.08769	1.30764	1.49965	2.90755	0.50374	0.71274	1.87938	3.89271
34	1.06222	1.27971	1.46644	2.82744	0.49105	0.69478	1.83203	3.84568
35	1.03801	1.25336	1.43510	2.75328	0.47910	0.67787	1.78744	3.80160
36	1.01496	1.22847	1.40552	2.68460	0.46785	0.66195	1.74547	3.76051
37	0.99300	1.20497	1.37760	2.62100	0.45726	0.64698	1.70599	3.72245
38	0.97202	1.18276	1.35124	2.56209	0.44731	0.63290	1.66887	3.68746
39	0.95197	1.16178	1.32634	2.50753	0.43797	0.61968	1.63399	3.65557
40	0.93278	1.14194	1.30283	2.45701	0.42919	0.60726	1.60125	3.62676
41	0.91439	1.12317	1.28061	2.41027	0.42096	0.59562	1.57055	3.60102
42	0.89673	1.10539	1.25961	2.36704	0.41325	0.58471	1.54179	3.57824
43	0.87977	1.08855	1.23973	2.32710	0.40604	0.57451	1.51489	3.55826
44	0.86344	1.07255	1.22090	2.29024	0.39931	0.56498	1.48978	3.54099
45	0.84771	1.05734	1.20302	2.25629	0.39304	0.55610	1.46636	3.52617
46	0.83254	1.04282	1.18601	2.22507	0.38720	0.54785	1.44459	3.51353
47	0.81787	1.02892	1.16977	2.19645	0.38179	0.54019	1.42439	3.50270
48	0.80392	1.01565	1.15427	2.17023	0.37678	0.53310	1.40571	3.49322
49	0.80215	1.01378	1.15187	2.14603	0.37217	0.52658	1.38850	3.49322
50	0.80047	1.01202	1.14960	2.12429	0.36793	0.52059	1.37271	3.49322
51	0.79888	1.01036	1.14747	2.10489	0.36407	0.51512	1.35829	3.49322
52	0.79738	1.00879	1.14545	2.08774	0.36056	0.51016	1.34520	3.49322
53	0.79596	1.00730	1.14354	2.07275	0.35740	0.50569	1.33342	3.49322
54	0.79461	1.00589	1.14172	2.05986	0.35458	0.50170	1.32290	3.49322
55	0.79333	1.00455	1.14001	2.04899	0.35210	0.49818	1.31362	3.49322
56	0.82221	1.04734	1.19360	2.04011	0.34993	0.49512	1.30555	3.61395
57	0.85115	1.09019	1.24728	2.03316	0.34809	0.49251	1.29868	3.73467
58	0.88014	1.13311	1.30104	2.02813	0.34656	0.49035	1.29297	3.85539
59	0.90919	1.17607	1.35487	2.02498	0.34534	0.48863	1.28843	3.97612
60	0.93828	1.21909	1.40876	2.02371	0.34443	0.48734	1.28503	4.09684
61	0.96742	1.26216	1.46271	2.02433	0.34383	0.48648	1.28277	4.21757
62	0.99660	1.30527	1.51672	2.02682	0.34353	0.48605	1.28164	4.33829
63	1.02582	1.34842	1.57079	2.03123	0.34353	0.48605	1.28165	4.45901
64	1.05508	1.39161	1.62491	2.03756	0.34383	0.48648	1.28277	4.57974
65	1.08438	1.43484	1.67907	2.04586	0.34443	0.48734	1.28503	4.70046

Orange 1996 Time Period 4 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	79.18172	99.46539	124.01405	227.29385	5.34957	6.15454	41.37212	157.04646
4	60.89841	76.54625	95.36644	207.66867	4.93024	5.67210	38.12904	125.24799
5	49.85181	62.50459	77.47501	190.15578	4.55205	5.23701	35.20430	102.29706
6	42.45932	53.04259	65.27863	174.50339	4.21052	4.84409	32.56302	85.36110
7	37.17050	46.25790	56.47739	160.49199	3.90172	4.48882	30.17480	72.60880
8	33.20337	41.17249	49.86115	147.93071	3.62215	4.16718	28.01268	62.82718
9	30.12024	37.23047	44.72911	136.65285	3.36874	3.87564	26.05284	55.19521
10	27.65704	34.09239	40.64691	126.51282	3.13876	3.61106	24.27428	49.14497
11	25.64487	31.53926	37.33144	117.38327	2.92981	3.37067	22.65836	44.27676
12	23.97084	29.42360	34.59052	109.15234	2.73975	3.15201	21.18849	40.30370
13	22.55656	27.64258	32.28949	101.72212	2.56669	2.95291	19.85011	37.01662
14	21.34592	26.12233	30.33150	95.00632	2.40894	2.77142	18.63011	34.26093
15	20.29779	24.80850	28.64511	88.92953	2.26501	2.60583	17.51695	31.92058
16	19.38124	23.66031	27.17688	83.42458	2.13355	2.45459	16.50032	29.90767
17	18.57271	22.64661	25.88589	78.43297	2.01338	2.31634	15.57101	28.15468
18	17.85384	21.74324	24.74055	73.90234	1.90345	2.18986	14.72080	26.60977
19	17.21014	20.93135	23.71608	69.78673	1.80279	2.07406	13.94234	25.23225
20	16.51987	20.21521	22.84407	66.04550	1.71057	1.96796	13.22913	23.99080
21	15.78382	19.39568	21.91006	62.64252	1.62602	1.87069	12.57524	22.86066
22	15.11378	18.64503	21.05801	59.54567	1.54847	1.78147	11.97547	21.82280
23	14.50106	17.95401	20.27663	56.72662	1.47730	1.69959	11.42508	20.86220
24	13.93847	17.31511	19.55678	54.16002	1.41197	1.62443	10.91983	19.96739
25	13.42001	16.72220	18.89098	51.82349	1.35199	1.55542	10.45594	19.12962
26	12.94063	16.17036	18.27306	49.69695	1.29691	1.49206	10.03000	18.34216
27	12.49608	15.65553	17.69797	47.76266	1.24635	1.43389	9.63893	17.60001
28	12.08272	15.17434	17.16142	46.00465	1.19993	1.38049	9.27999	16.89940
29	11.69744	14.72401	16.65994	44.40904	1.15736	1.33150	8.95069	16.23779
30	11.33755	14.30215	16.19054	42.96313	1.11832	1.28660	8.64880	15.61325
31	11.00074	13.90676	15.75070	41.65584	1.08257	1.24547	8.37231	15.02424
32	10.68496	13.53605	15.33818	40.47733	1.04987	1.20785	8.11943	14.46971
33	10.38843	13.18848	14.95115	39.41876	1.02002	1.17350	7.88854	13.94921
34	10.10956	12.86264	14.58786	38.47244	0.99282	1.14220	7.67815	13.46168
35	9.84694	12.55725	14.24685	37.63150	0.96810	1.11377	7.48700	13.00692
36	9.59933	12.27112	13.92674	36.89001	0.94572	1.08802	7.31392	12.58387
37	9.36560	12.00317	13.62630	36.24280	0.92554	1.06480	7.15785	12.19237
38	9.14471	11.75235	13.34437	35.68539	0.90744	1.04398	7.01786	11.83118
39	8.93576	11.51768	13.07981	35.21393	0.89131	1.02543	6.89316	11.49952
40	8.73789	11.29819	12.83164	34.82521	0.87707	1.00904	6.78300	11.19633
41	8.55033	11.09297	12.59882	34.51663	0.86462	0.99473	6.68676	10.92039
42	8.37236	10.90106	12.38032	34.28615	0.85391	0.98240	6.60389	10.66996
43	8.20332	10.72153	12.17521	34.13219	0.84486	0.97199	6.53394	10.44351
44	8.04257	10.55341	11.98246	34.05382	0.83744	0.96345	6.47649	10.23874
45	7.88952	10.39565	11.80107	34.05042	0.83159	0.95672	6.43126	10.05357
46	7.74358	10.24707	11.62994	34.12196	0.82728	0.95176	6.39796	9.88528
47	7.60419	10.10645	11.46792	34.26900	0.82450	0.94856	6.37643	9.73058
48	7.47078	9.97237	11.31382	34.49248	0.82322	0.94709	6.36656	9.58622
49	7.47078	9.97237	11.31382	34.79387	0.82344	0.94735	6.36828	9.58622
50	7.47078	9.97237	11.31382	35.17522	0.82517	0.94933	6.38160	9.58622
51	7.47078	9.97237	11.31382	35.63901	0.82840	0.95305	6.40660	9.58622
52	7.47078	9.97237	11.31382	36.18852	0.83316	0.95853	6.44342	9.58622
53	7.47078	9.97237	11.31382	36.82733	0.83947	0.96579	6.49225	9.58622
54	7.47078	9.97237	11.31382	37.56010	0.84738	0.97488	6.55337	9.58622
55	7.47078	9.97237	11.31382	38.39171	0.85691	0.98585	6.62712	9.58622
56	8.51509	11.63338	13.32002	39.32820	0.86813	0.99876	6.71390	11.89486
57	9.55940	13.29438	15.32621	40.37622	0.88110	1.01368	6.81421	14.20351
58	10.60371	14.95538	17.33238	41.54352	0.89590	1.03070	6.92861	16.51213
59	11.64802	16.61636	19.33856	42.83870	0.91260	1.04992	7.05777	18.82077
60	12.69232	18.27736	21.34477	44.27153	0.93130	1.07144	7.20243	21.12938
61	13.73664	19.93834	23.35094	45.85306	0.95212	1.09539	7.36346	23.43802
62	14.78093	21.59932	25.35715	47.59569	0.97518	1.12192	7.54179	25.74661
63	15.82524	23.26031	27.36334	49.51332	1.00062	1.15118	7.73851	28.05528
64	16.86952	24.92133	29.36952	51.62173	1.02859	1.18336	7.95483	30.36389
65	17.91385	26.58234	31.37573	53.93822	1.05927	1.21866	8.19210	32.67253

Orange 1996 Time Period 4 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	2.07892	2.31929	2.55570	4.56648	2.74037	3.13502	27.83104	0.90987
4	1.90941	2.13175	2.35887	4.61373	2.62495	3.00298	26.65887	0.87028
5	1.80675	2.01849	2.24099	4.66098	2.51797	2.88059	25.57236	0.83742
6	1.73765	1.94269	2.16275	4.70824	2.41878	2.76712	24.56497	0.81079
7	1.68783	1.88855	2.10730	4.75549	2.32680	2.66189	23.63083	0.78987
8	1.65014	1.84813	2.06618	4.80275	2.24149	2.56430	22.76448	0.77420
9	1.62059	1.81700	2.03468	4.85000	2.16238	2.47380	21.96109	0.76331
10	1.59680	1.79249	2.00998	4.89726	2.08903	2.38988	21.21614	0.75676
11	1.57723	1.77287	1.99025	4.94451	2.02104	2.31210	20.52560	0.75411
12	1.56087	1.75698	1.97428	4.99176	1.95804	2.24002	19.88574	0.75497
13	1.54700	1.74400	1.96121	5.03902	1.89969	2.17327	19.29320	0.75894
14	1.53512	1.73333	1.95042	5.08627	1.84571	2.11151	18.74493	0.76566
15	1.52484	1.72454	1.94147	5.13353	1.79580	2.05442	18.23810	0.77476
16	1.51587	1.71727	1.93400	5.18078	1.74973	2.00172	17.77022	0.78591
17	1.50801	1.71127	1.92774	5.22803	1.70726	1.95313	17.33893	0.79880
18	1.50106	1.70631	1.92249	5.27529	1.66819	1.90844	16.94214	0.81313
19	1.49491	1.70222	1.91807	5.32255	1.63234	1.86741	16.57796	0.82862
20	1.49585	1.70115	1.91695	5.36980	1.59952	1.82987	16.24466	0.84500
21	1.50426	1.71280	1.92996	5.41705	1.56958	1.79563	15.94070	0.86203
22	1.51197	1.72364	1.94200	5.46430	1.54240	1.76453	15.66463	0.87948
23	1.51907	1.73377	1.95317	5.51156	1.51784	1.73643	15.41523	0.89714
24	1.52565	1.74326	1.96357	5.55881	1.49580	1.71122	15.19134	0.91483
25	1.53178	1.75216	1.97327	5.60607	1.47617	1.68876	14.99198	0.93238
26	1.53749	1.76052	1.98236	5.65332	1.45887	1.66897	14.81627	0.94962
27	1.54286	1.76838	1.99088	5.70058	1.44382	1.65175	14.66341	0.96643
28	1.54790	1.77579	1.99890	5.74783	1.43095	1.63703	14.53276	0.98268
29	1.55267	1.78277	2.00644	5.79508	1.42022	1.62475	14.42374	0.99828
30	1.55719	1.78934	2.01357	5.84234	1.41157	1.61485	14.33588	1.01314
31	1.56149	1.79555	2.02030	5.88959	1.40496	1.60730	14.26879	1.02720
32	1.56560	1.80141	2.02669	5.93684	1.40038	1.60205	14.22222	1.04042
33	1.56953	1.80694	2.03276	5.98410	1.39779	1.59909	14.19593	1.05277
34	1.57331	1.81218	2.03854	6.03135	1.39719	1.59840	14.18982	1.06424
35	1.57695	1.81714	2.04407	6.07861	1.39857	1.59998	14.20389	1.07484
36	1.58048	1.82185	2.04938	6.12586	1.40195	1.60384	14.23815	1.08460
37	1.58391	1.82633	2.05449	6.17311	1.40733	1.61000	14.29280	1.09356
38	1.58725	1.83062	2.05943	6.22037	1.41473	1.61847	14.36803	1.10179
39	1.59053	1.83473	2.06424	6.26762	1.42420	1.62930	14.46417	1.10937
40	1.59375	1.83869	2.06894	6.31488	1.43577	1.64254	14.58167	1.11639
41	1.59693	1.84254	2.07357	6.36213	1.44949	1.65824	14.72099	1.12298
42	1.60009	1.84631	2.07816	6.40939	1.46542	1.67646	14.88278	1.12927
43	1.60324	1.85002	2.08274	6.45664	1.48363	1.69729	15.06774	1.13543
44	1.60638	1.85371	2.08733	6.50390	1.50420	1.72083	15.27664	1.14161
45	1.60955	1.85742	2.09199	6.55115	1.52722	1.74716	15.51046	1.14801
46	1.61276	1.86118	2.09673	6.59841	1.55280	1.77643	15.77025	1.15484
47	1.61601	1.86504	2.10161	6.64566	1.58105	1.80875	16.05716	1.16232
48	1.61932	1.86903	2.10665	6.69291	1.61211	1.84427	16.37251	1.17071
49	1.67916	1.94371	2.19316	6.74017	1.64610	1.88317	16.71782	1.20883
50	1.73899	2.01838	2.27967	6.78743	1.68321	1.92561	17.09464	1.24695
51	1.79882	2.09306	2.36618	6.83468	1.72359	1.97181	17.50476	1.28507
52	1.85866	2.16774	2.45269	6.88193	1.76746	2.02199	17.95026	1.32319
53	1.91850	2.24241	2.53920	6.92919	1.81501	2.07640	18.43320	1.36131
54	1.97833	2.31709	2.62570	6.97644	1.86649	2.13529	18.95602	1.39943
55	2.03817	2.39177	2.71221	7.02369	1.92216	2.19898	19.52144	1.43756
56	2.09800	2.46644	2.79872	7.07095	1.98231	2.26779	20.13223	1.47568
57	2.15784	2.54112	2.88523	7.11821	2.04724	2.34207	20.79169	1.51380
58	2.21767	2.61580	2.97174	7.16546	2.11730	2.42222	21.50319	1.55192
59	2.27751	2.69048	3.05825	7.21271	2.19287	2.50867	22.27071	1.59004
60	2.33734	2.76515	3.14475	7.25996	2.27437	2.60190	23.09837	1.62816
61	2.39718	2.83983	3.23126	7.30722	2.36225	2.70244	23.99084	1.66628
62	2.45702	2.91451	3.31777	7.35447	2.45701	2.81085	24.95317	1.70440
63	2.51685	2.98919	3.40428	7.40173	2.55919	2.92775	25.99104	1.74252
64	2.57669	3.06386	3.49079	7.44898	2.66943	3.05386	27.11052	1.78064
65	2.63652	3.13854	3.57730	7.49624	2.78836	3.18992	28.31841	1.81877

Orange 1999 Time Period 1 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	6.81999	8.37767	9.98759	14.64454	1.39423	1.92004	5.47708	15.09826
4	5.01593	6.20014	7.37832	12.02657	1.32369	1.82290	5.19997	12.75028
5	4.01012	4.96638	5.88832	10.42763	1.25782	1.73219	4.94122	11.01126
6	3.37153	4.17431	4.92683	9.27876	1.19629	1.64745	4.69948	9.69866
7	2.93115	3.62402	4.25702	8.37737	1.13876	1.56823	4.47350	8.69077
8	2.65143	3.26416	3.81422	7.71524	1.08496	1.49414	4.26214	7.90469
9	2.43506	2.98406	3.47045	7.13803	1.03461	1.42480	4.06434	7.28279
10	2.25892	2.75556	3.19154	6.62247	0.98747	1.35987	3.87913	6.78423
11	2.11204	2.56467	2.95997	6.15975	0.94330	1.29904	3.70562	6.37956
12	1.98711	2.40197	2.76393	5.74288	0.90190	1.24203	3.54299	6.04721
13	1.87906	2.26092	2.59515	5.36613	0.86307	1.18857	3.39048	5.77111
14	1.78425	2.13681	2.44771	5.02470	0.82665	1.13841	3.24739	5.53914
15	1.70003	2.02619	2.31723	4.71452	0.79246	1.09132	3.11308	5.34202
16	1.62439	1.92646	2.20042	4.43213	0.76035	1.04711	2.98694	5.17260
17	1.55582	1.83564	2.09479	4.17450	0.73019	1.00557	2.86845	5.02527
18	1.49312	1.75218	1.99838	3.93899	0.70184	0.96652	2.75708	4.89563
19	1.43535	1.67489	1.90966	3.72333	0.67518	0.92982	2.65236	4.78022
20	1.37582	1.60643	1.83089	3.52958	0.65011	0.89529	2.55387	4.67626
21	1.32188	1.54759	1.76179	3.35803	0.62652	0.86280	2.46121	4.58159
22	1.27254	1.49372	1.69863	3.20093	0.60432	0.83223	2.37399	4.49447
23	1.22720	1.44416	1.64062	3.05690	0.58342	0.80344	2.29188	4.41355
24	1.18536	1.39839	1.58710	2.92467	0.56373	0.77634	2.21456	4.33777
25	1.14660	1.35594	1.53753	2.80316	0.54519	0.75081	2.14173	4.26635
26	1.11057	1.31646	1.49147	2.69136	0.52773	0.72675	2.07312	4.19866
27	1.07697	1.27963	1.44853	2.58840	0.51127	0.70409	2.00847	4.13429
28	1.04554	1.24518	1.40840	2.49348	0.49576	0.68273	1.94755	4.07293
29	1.01606	1.21291	1.37082	2.40591	0.48115	0.66261	1.89014	4.01439
30	0.98835	1.18261	1.33556	2.32503	0.46738	0.64364	1.83604	3.95855
31	0.96223	1.15413	1.30241	2.25029	0.45440	0.62577	1.78506	3.90538
32	0.93756	1.12731	1.27120	2.18117	0.44217	0.60893	1.73702	3.85486
33	0.91422	1.10204	1.24180	2.11720	0.43065	0.59307	1.69176	3.80706
34	0.89209	1.07819	1.21406	2.05797	0.41980	0.57812	1.64914	3.76198
35	0.87107	1.05567	1.18787	2.00311	0.40958	0.56405	1.60900	3.71973
36	0.85108	1.03439	1.16312	1.95227	0.39997	0.55081	1.57122	3.68034
37	0.83203	1.01425	1.13972	1.90516	0.39092	0.53835	1.53568	3.64385
38	0.81385	0.99519	1.11757	1.86148	0.38241	0.52663	1.50226	3.61032
39	0.79647	0.97713	1.09659	1.82100	0.37442	0.51563	1.47087	3.57975
40	0.77984	0.96001	1.07671	1.78348	0.36692	0.50530	1.44140	3.55213
41	0.76391	0.94376	1.05785	1.74874	0.35988	0.49561	1.41376	3.52746
42	0.74862	0.92831	1.03995	1.71657	0.35329	0.48653	1.38787	3.50563
43	0.73392	0.91362	1.02293	1.68681	0.34713	0.47805	1.36366	3.48647
44	0.71979	0.89963	1.00673	1.65932	0.34137	0.47012	1.34105	3.46992
45	0.70617	0.88627	0.99129	1.63396	0.33601	0.46273	1.31997	3.45572
46	0.69303	0.87349	0.97654	1.61060	0.33102	0.45586	1.30037	3.44361
47	0.68034	0.86123	0.96241	1.58915	0.32639	0.44949	1.28220	3.43322
48	0.66825	0.84949	0.94888	1.56950	0.32211	0.44359	1.26538	3.42414
49	0.66659	0.84772	0.94678	1.55172	0.31817	0.43816	1.24988	3.42414
50	0.66503	0.84606	0.94480	1.53575	0.31455	0.43318	1.23567	3.42414
51	0.66355	0.84448	0.94292	1.52150	0.31125	0.42863	1.22269	3.42414
52	0.66215	0.84299	0.94116	1.50890	0.30825	0.42450	1.21091	3.42414
53	0.66082	0.84158	0.93948	1.49788	0.30555	0.42078	1.20030	3.42414
54	0.65957	0.84024	0.93790	1.48841	0.30314	0.41746	1.19083	3.42414
55	0.65838	0.83898	0.93640	1.48042	0.30101	0.41453	1.18248	3.42414
56	0.67886	0.86858	0.97278	1.47388	0.29916	0.41198	1.17522	3.53985
57	0.69939	0.89824	1.00923	1.46877	0.29759	0.40981	1.16903	3.65557
58	0.71998	0.92795	1.04575	1.46507	0.29628	0.40802	1.16389	3.77129
59	0.74061	0.95772	1.08234	1.46274	0.29524	0.40658	1.15981	3.88701
60	0.76129	0.98754	1.11898	1.46180	0.29446	0.40551	1.15675	4.00273
61	0.78201	1.01740	1.15567	1.46223	0.29394	0.40480	1.15471	4.11845
62	0.80278	1.04731	1.19242	1.46406	0.29368	0.40444	1.15370	4.23416
63	0.82358	1.07725	1.22922	1.46727	0.29368	0.40444	1.15370	4.34988
64	0.84441	1.10723	1.26606	1.47191	0.29394	0.40480	1.15471	4.46560
65	0.86528	1.13725	1.30294	1.47799	0.29446	0.40551	1.15675	4.58132

Orange 1999 Time Period 1 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	60.15308	75.44315	91.86813	155.38524	4.92597	5.54844	38.83043	157.27240
4	46.70027	58.52783	71.13190	141.96884	4.53984	5.11351	35.78664	125.42819
5	38.60870	48.26567	58.35326	129.99646	4.19160	4.72126	33.04153	102.44420
6	33.20796	41.38815	49.70869	119.29601	3.87712	4.36704	30.56255	85.48389
7	29.34911	36.46886	43.49449	109.71735	3.59277	4.04676	28.32106	72.71323
8	26.45569	32.78351	38.82927	101.13002	3.33533	3.75679	26.29175	62.91756
9	24.20656	29.92461	35.20944	93.42017	3.10198	3.49396	24.45235	55.27458
10	22.40866	27.64526	32.32620	86.48810	2.89022	3.25544	22.78304	49.21570
11	20.93884	25.78725	29.97980	80.24686	2.69781	3.03872	21.26636	44.34048
12	19.71497	24.24437	28.03558	74.61993	2.52281	2.84160	19.88680	40.36165
13	18.68008	22.94292	26.39949	69.54041	2.36345	2.66210	18.63063	37.06985
14	17.79350	21.82996	25.00407	64.94926	2.21819	2.49849	17.48560	34.31021
15	17.02536	20.86664	23.79974	60.79503	2.08565	2.34920	16.44081	31.96652
16	16.35324	20.02385	22.74931	57.03166	1.96461	2.21286	15.48665	29.95068
17	15.76005	19.27925	21.82439	53.61922	1.85396	2.08823	14.61441	28.19521
18	15.23244	18.61560	21.00296	50.52193	1.75272	1.97421	13.81644	26.64801
19	14.75993	18.01936	20.26781	47.70834	1.66004	1.86981	13.08580	25.26854
20	14.16202	17.38702	19.52237	45.15076	1.57512	1.77416	12.41640	24.02528
21	13.45162	16.60548	18.64270	42.82434	1.49727	1.68647	11.80269	22.89355
22	12.80521	15.89162	17.84122	40.70724	1.42586	1.60603	11.23976	21.85420
23	12.21441	15.23644	17.10745	38.78001	1.36032	1.53222	10.72318	20.89223
24	11.67228	14.63261	16.43283	37.02548	1.30017	1.46446	10.24898	19.99611
25	11.17299	14.07411	15.81020	35.42812	1.24493	1.40225	9.81359	19.15715
26	10.71164	13.55594	15.23362	33.97435	1.19422	1.34513	9.41381	18.36855
27	10.28408	13.07392	14.69816	32.65202	1.14766	1.29268	9.04677	17.62534
28	9.88674	12.62455	14.19961	31.45018	1.10492	1.24454	8.70988	16.92372
29	9.51657	12.20486	13.73442	30.35936	1.06571	1.20038	8.40081	16.26115
30	9.17093	11.81229	13.29955	29.37094	1.02977	1.15989	8.11746	15.63571
31	8.84752	11.44466	12.89239	28.47725	0.99685	1.12281	7.85796	15.04585
32	8.54433	11.10002	12.51065	27.67154	0.96674	1.08890	7.62061	14.49053
33	8.25958	10.77667	12.15234	26.94788	0.93925	1.05793	7.40391	13.96928
34	7.99171	10.47310	11.81569	26.30096	0.91420	1.02972	7.20645	13.48105
35	7.73934	10.18793	11.49914	25.72607	0.89144	1.00409	7.02704	13.02563
36	7.50122	9.91991	11.20127	25.21916	0.87083	0.98087	6.86460	12.60197
37	7.27624	9.66792	10.92080	24.77672	0.85225	0.95994	6.71811	12.20991
38	7.06340	9.43090	10.65658	24.39566	0.83558	0.94117	6.58673	11.84820
39	6.86180	9.20787	10.40749	24.07330	0.82073	0.92445	6.46968	11.51606
40	6.67063	8.99793	10.17256	23.80757	0.80762	0.90967	6.36629	11.21243
41	6.48912	8.80021	9.95084	23.59663	0.79616	0.89676	6.27596	10.93609
42	6.31661	8.61388	9.74141	23.43906	0.78629	0.88565	6.19818	10.68531
43	6.15246	8.43811	9.54343	23.33383	0.77796	0.87627	6.13252	10.45853
44	5.99608	8.27212	9.35606	23.28024	0.77112	0.86857	6.07861	10.25347
45	5.84693	8.11508	9.17849	23.27791	0.76574	0.86250	6.03615	10.06802
46	5.70448	7.96611	9.00987	23.32684	0.76177	0.85803	6.00490	9.89949
47	5.56824	7.82432	8.84934	23.42737	0.75921	0.85515	5.98470	9.74458
48	5.43773	7.68871	8.69607	23.58012	0.75803	0.85382	5.97543	9.60001
49	5.43773	7.68871	8.69607	23.78618	0.75824	0.85405	5.97705	9.60001
50	5.43773	7.68871	8.69607	24.04688	0.75983	0.85584	5.98955	9.60001
51	5.43773	7.68871	8.69607	24.36395	0.76280	0.85919	6.01301	9.60001
52	5.43773	7.68871	8.69607	24.73961	0.76719	0.86413	6.04757	9.60001
53	5.43773	7.68871	8.69607	25.17632	0.77300	0.87068	6.09340	9.60001
54	5.43773	7.68871	8.69607	25.67725	0.78028	0.87888	6.15076	9.60001
55	5.43773	7.68871	8.69607	26.24576	0.78906	0.88877	6.21998	9.60001
56	6.08250	8.75778	9.98078	26.88597	0.79939	0.90040	6.30143	11.91197
57	6.72727	9.82686	11.26549	27.60243	0.81133	0.91386	6.39558	14.22393
58	7.37203	10.89593	12.55020	28.40042	0.82496	0.92920	6.50296	16.53589
59	8.01680	11.96501	13.83492	29.28584	0.84033	0.94652	6.62418	18.84782
60	8.66157	13.03409	15.11963	30.26538	0.85756	0.96592	6.75996	21.15977
61	9.30634	14.10316	16.40433	31.34657	0.87673	0.98752	6.91109	23.47173
62	9.95111	15.17224	17.68901	32.53790	0.89796	1.01143	7.07846	25.78365
63	10.59587	16.24129	18.97372	33.84883	0.92139	1.03782	7.26309	28.09561
64	11.24064	17.31036	20.25842	35.29021	0.94714	1.06683	7.46613	30.40759
65	11.88541	18.37943	21.54312	36.87387	0.97539	1.09864	7.68882	32.71953

Orange 1999 Time Period 1 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	1.86125	2.11459	2.41124	4.10438	2.35405	2.64792	22.51224	0.91266
4	1.70488	1.93846	2.21589	4.14685	2.25491	2.53640	21.56410	0.87295
5	1.61067	1.83239	2.09886	4.18933	2.16300	2.43302	20.68524	0.83999
6	1.54759	1.76153	2.02108	4.23180	2.07780	2.33718	19.87039	0.81327
7	1.50234	1.71091	1.96580	4.27427	1.99878	2.24830	19.11475	0.79230
8	1.46826	1.67303	1.92463	4.31674	1.92551	2.16588	18.41400	0.77658
9	1.44167	1.64373	1.89290	4.35921	1.85755	2.08944	17.76411	0.76565
10	1.42034	1.62049	1.86781	4.40169	1.79454	2.01856	17.16154	0.75908
11	1.40284	1.60169	1.84756	4.44416	1.73613	1.95286	16.60295	0.75643
12	1.38824	1.58627	1.83095	4.48663	1.68201	1.89198	16.08539	0.75729
13	1.37588	1.57345	1.81715	4.52910	1.63189	1.83561	15.60609	0.76127
14	1.36529	1.56271	1.80557	4.57158	1.58551	1.78344	15.16259	0.76800
15	1.35612	1.55362	1.79575	4.61405	1.54265	1.73522	14.75263	0.77713
16	1.34811	1.54590	1.78736	4.65652	1.50307	1.69071	14.37416	0.78832
17	1.34106	1.53929	1.78015	4.69899	1.46659	1.64967	14.02528	0.80125
18	1.33482	1.53360	1.77392	4.74147	1.43303	1.61192	13.70432	0.81563
19	1.32927	1.52870	1.76849	4.78394	1.40222	1.57727	13.40974	0.83116
20	1.33100	1.52451	1.76375	4.82641	1.37403	1.54556	13.14013	0.84759
21	1.33896	1.53183	1.77225	4.86888	1.34832	1.51664	12.89425	0.86467
22	1.34623	1.53862	1.78008	4.91135	1.32497	1.49037	12.67095	0.88217
23	1.35289	1.54494	1.78734	4.95383	1.30387	1.46664	12.46921	0.89989
24	1.35903	1.55083	1.79408	4.99630	1.28494	1.44534	12.28811	0.91764
25	1.36470	1.55633	1.80035	5.03877	1.26807	1.42638	12.12684	0.93524
26	1.36996	1.56149	1.80621	5.08124	1.25321	1.40966	11.98471	0.95253
27	1.37486	1.56633	1.81169	5.12372	1.24028	1.39512	11.86107	0.96939
28	1.37945	1.57088	1.81684	5.16619	1.22923	1.38268	11.75538	0.98569
29	1.38374	1.57515	1.82167	5.20866	1.22001	1.37231	11.66721	1.00134
30	1.38777	1.57917	1.82623	5.25113	1.21258	1.36395	11.59613	1.01624
31	1.39157	1.58296	1.83053	5.29361	1.20691	1.35757	11.54187	1.03035
32	1.39517	1.58654	1.83459	5.33608	1.20297	1.35314	11.50420	1.04361
33	1.39858	1.58991	1.83845	5.37855	1.20074	1.35064	11.48293	1.05600
34	1.40182	1.59309	1.84212	5.42102	1.20023	1.35006	11.47799	1.06751
35	1.40491	1.59611	1.84561	5.46350	1.20141	1.35139	11.48936	1.07814
36	1.40786	1.59897	1.84896	5.50597	1.20431	1.35466	11.51709	1.08793
37	1.41069	1.60168	1.85217	5.54844	1.20893	1.35985	11.56129	1.09692
38	1.41341	1.60428	1.85526	5.59091	1.21530	1.36701	11.62214	1.10517
39	1.41603	1.60676	1.85826	5.63338	1.22343	1.37616	11.69991	1.11277
40	1.41856	1.60915	1.86119	5.67586	1.23337	1.38734	11.79495	1.11981
41	1.42102	1.61146	1.86405	5.71833	1.24516	1.40060	11.90765	1.12642
42	1.42341	1.61371	1.86687	5.76080	1.25884	1.41599	12.03851	1.13274
43	1.42575	1.61592	1.86967	5.80328	1.27448	1.43358	12.18813	1.13891
44	1.42804	1.61810	1.87246	5.84575	1.29215	1.45346	12.35711	1.14511
45	1.43029	1.62028	1.87528	5.88822	1.31193	1.47571	12.54624	1.15153
46	1.43252	1.62247	1.87813	5.93070	1.33390	1.50042	12.75638	1.15838
47	1.43473	1.62470	1.88104	5.97316	1.35817	1.52772	12.98847	1.16589
48	1.43693	1.62698	1.88402	6.01564	1.38485	1.55773	13.24356	1.17430
49	1.43899	1.62907	1.88691	6.05811	1.41405	1.59058	13.52287	1.18254
50	1.44099	1.63106	1.88979	6.10059	1.44593	1.62643	13.82767	1.19077
51	1.44294	1.63299	1.89266	6.14305	1.48062	1.66545	14.15943	1.20001
52	1.44484	1.63486	1.89552	6.18553	1.51829	1.70783	14.51978	1.21025
53	1.44669	1.63669	1.89837	6.22800	1.55915	1.75379	14.91044	1.22149
54	1.44849	1.63849	1.90121	6.27047	1.60337	1.80353	15.33336	1.23373
55	1.45024	1.64024	1.90404	6.31295	1.65119	1.85732	15.79071	1.24697
56	1.45194	1.64194	1.90686	6.35542	1.70286	1.91544	16.28476	1.26121
57	1.45359	1.64359	1.90967	6.39789	1.75864	1.97818	16.81819	1.27645
58	1.45519	1.64519	1.91247	6.44036	1.81882	2.04588	17.39374	1.29269
59	1.45674	1.64674	1.91526	6.48283	1.88374	2.11890	18.01456	1.30993
60	1.45824	1.64824	1.91804	6.52531	1.95374	2.19764	18.68405	1.32817
61	1.45969	1.64969	1.92081	6.56778	2.02923	2.28255	19.40594	1.34741
62	1.46109	1.65109	1.92357	6.61025	2.11063	2.37412	20.18439	1.36765
63	1.46244	1.65244	1.92632	6.65273	2.19842	2.47286	21.02390	1.38889
64	1.46374	1.65374	1.92907	6.69520	2.29311	2.57937	21.92943	1.41013
65	1.46500	1.65500	1.93181	6.73767	2.39528	2.69429	22.90645	1.43237

Orange 1999 Time Period 2 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	8.69306	9.90410	11.69469	19.79456	1.39423	1.92004	5.47708	17.03685
4	6.22242	7.13827	8.38794	15.54404	1.32369	1.82290	5.19997	14.71378
5	4.88471	5.62290	6.57157	13.14640	1.25782	1.73219	4.94122	12.99319
6	4.05320	4.67284	5.43087	11.53511	1.19629	1.64745	4.69948	11.69449
7	3.48893	4.02443	4.65185	10.33474	1.13876	1.56823	4.47350	10.69729
8	3.15761	3.62152	4.16492	9.53389	1.08496	1.49414	4.26214	9.91954
9	2.90159	3.31108	3.79052	8.84891	1.03461	1.42480	4.06434	9.30423
10	2.69075	3.05893	3.48765	8.24089	0.98747	1.35987	3.87913	8.81096
11	2.51278	2.84927	3.23697	7.69745	0.94330	1.29904	3.70562	8.41058
12	2.35948	2.67147	3.02545	7.20912	0.90190	1.24203	3.54299	8.08175
13	2.22513	2.51813	2.84400	6.76840	0.86307	1.18857	3.39048	7.80858
14	2.10566	2.38391	2.68608	6.36915	0.82665	1.13841	3.24739	7.57906
15	1.99808	2.26493	2.54688	6.00633	0.79246	1.09132	3.11308	7.38403
16	1.90014	2.15823	2.42279	5.67565	0.76035	1.04711	2.98694	7.21641
17	1.81013	2.06157	2.31105	5.37346	0.73019	1.00557	2.86845	7.07064
18	1.72672	1.97322	2.20953	5.09663	0.70184	0.96652	2.75708	6.94237
19	1.64885	1.89179	2.11652	4.84244	0.67518	0.92982	2.65236	6.82819
20	1.57498	1.81884	2.03332	4.61690	0.65011	0.89529	2.55387	6.72533
21	1.51501	1.75376	1.95804	4.42213	0.62652	0.86280	2.46121	6.63166
22	1.46003	1.69412	1.88922	4.24373	0.60432	0.83223	2.37399	6.54547
23	1.40937	1.63920	1.82600	4.08009	0.58342	0.80344	2.29188	6.46540
24	1.36250	1.58841	1.76767	3.92977	0.56373	0.77634	2.21456	6.39043
25	1.31896	1.54127	1.71364	3.79152	0.54519	0.75081	2.14173	6.31976
26	1.27838	1.49738	1.66342	3.66420	0.52773	0.72675	2.07312	6.25279
27	1.24042	1.45639	1.61661	3.54683	0.51127	0.70409	2.00847	6.18911
28	1.20482	1.41802	1.57285	3.43849	0.49576	0.68273	1.94755	6.12839
29	1.17133	1.38203	1.53185	3.33838	0.48115	0.66261	1.89014	6.07047
30	1.13975	1.34823	1.49336	3.24579	0.46738	0.64364	1.83604	6.01523
31	1.10990	1.31641	1.45717	3.16007	0.45440	0.62577	1.78506	5.96262
32	1.08163	1.28645	1.42308	3.08066	0.44217	0.60893	1.73702	5.91264
33	1.05479	1.25818	1.39094	3.00702	0.43065	0.59307	1.69176	5.86534
34	1.02927	1.23150	1.36060	2.93868	0.41980	0.57812	1.64914	5.82074
35	1.00496	1.20630	1.33192	2.87523	0.40958	0.56405	1.60900	5.77894
36	0.98175	1.18247	1.30480	2.81629	0.39997	0.55081	1.57122	5.73996
37	0.95958	1.15992	1.27912	2.76150	0.39092	0.53835	1.53568	5.70387
38	0.93835	1.13857	1.25479	2.71057	0.38241	0.52663	1.50226	5.67069
39	0.91800	1.11833	1.23171	2.66321	0.37442	0.51563	1.47087	5.64045
40	0.89846	1.09915	1.20982	2.61917	0.36692	0.50530	1.44140	5.61312
41	0.87967	1.08094	1.18901	2.57822	0.35988	0.49561	1.41376	5.58871
42	0.86159	1.06363	1.16923	2.54016	0.35329	0.48653	1.38787	5.56710
43	0.84416	1.04717	1.15040	2.50479	0.34713	0.47805	1.36366	5.54815
44	0.82733	1.03148	1.13244	2.47195	0.34137	0.47012	1.34105	5.53178
45	0.81107	1.01651	1.11530	2.44149	0.33601	0.46273	1.31997	5.51772
46	0.79533	1.00218	1.09890	2.41328	0.33102	0.45586	1.30037	5.50574
47	0.78007	0.98842	1.08317	2.38718	0.32639	0.44949	1.28220	5.49546
48	0.76556	0.97521	1.06805	2.36306	0.32211	0.44359	1.26538	5.48648
49	0.76266	0.97209	1.06429	2.34070	0.31817	0.43816	1.24988	5.48648
50	0.75992	0.96916	1.06075	2.32049	0.31455	0.43318	1.23567	5.48648
51	0.75734	0.96639	1.05742	2.30229	0.31125	0.42863	1.22269	5.48648
52	0.75490	0.96378	1.05427	2.28604	0.30825	0.42450	1.21091	5.48648
53	0.75259	0.96130	1.05129	2.27164	0.30555	0.42078	1.20030	5.48648
54	0.75041	0.95896	1.04848	2.25904	0.30314	0.41746	1.19083	5.48648
55	0.74834	0.95674	1.04581	2.24816	0.30101	0.41453	1.18248	5.48648
56	0.76863	0.98741	1.08219	2.23897	0.29916	0.41198	1.17522	5.60097
57	0.78902	1.01818	1.11871	2.23142	0.29759	0.40981	1.16903	5.71546
58	0.80950	1.04904	1.15534	2.22549	0.29628	0.40802	1.16389	5.82995
59	0.83007	1.08001	1.19209	2.22114	0.29524	0.40658	1.15981	5.94444
60	0.85072	1.11105	1.22894	2.21836	0.29446	0.40551	1.15675	6.05894
61	0.87144	1.14218	1.26589	2.21716	0.29394	0.40480	1.15471	6.17343
62	0.89224	1.17339	1.30293	2.21751	0.29368	0.40444	1.15370	6.28792
63	0.91310	1.20466	1.34006	2.21946	0.29368	0.40444	1.15370	6.40241
64	0.93402	1.23600	1.37726	2.22299	0.29394	0.40480	1.15471	6.51690
65	0.95500	1.26741	1.41455	2.22814	0.29446	0.40551	1.15675	6.63139

Orange 1999 Time Period 2 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	62.61629	81.13483	98.87320	193.31950	4.92597	5.54844	38.83043	191.10464
4	48.56506	62.90717	76.48650	176.62779	4.53984	5.11351	35.78664	152.41014
5	40.10384	51.80154	62.63905	161.73257	4.19160	4.72126	33.04153	124.48190
6	34.45326	44.34381	53.25270	148.41982	3.87712	4.36704	30.56255	103.87308
7	30.41533	39.00670	46.49948	136.50270	3.59277	4.04676	28.32106	88.35526
8	27.38797	35.01003	41.42891	125.81897	3.33533	3.75679	26.29175	76.45233
9	25.03539	31.91270	37.49583	116.22693	3.10198	3.49396	24.45235	67.16521
10	23.15544	29.44650	34.36491	107.60254	2.89022	3.25544	22.78304	59.80290
11	21.61916	27.43900	31.81883	99.83759	2.69781	3.03872	21.26636	53.87892
12	20.34039	25.77428	29.71078	92.83698	2.52281	2.84160	19.88680	49.04420
13	19.25945	24.37173	27.93820	86.51735	2.36345	2.66210	18.63063	45.04433
14	18.33363	23.17342	26.42738	80.80540	2.21819	2.49849	17.48560	41.69101
15	17.53160	22.13675	25.12421	75.63693	2.08565	2.34920	16.44081	38.84315
16	16.82983	21.22978	23.98808	70.95483	1.96461	2.21286	15.48665	36.39363
17	16.21039	20.42813	22.98799	66.70930	1.85396	2.08823	14.61441	34.26057
18	15.65930	19.71286	22.09993	62.85587	1.75272	1.97421	13.81644	32.38051
19	15.16554	19.06921	21.30511	59.35541	1.66004	1.86981	13.08580	30.70428
20	14.54869	18.40160	20.51736	56.17346	1.57512	1.77416	12.41640	29.19357
21	13.82151	17.58488	19.59692	53.27910	1.49727	1.68647	11.80269	27.81837
22	13.15952	16.83734	18.75797	50.64514	1.42586	1.60603	11.23976	26.55544
23	12.55418	16.14975	17.98953	48.24744	1.36032	1.53222	10.72318	25.38651
24	11.99842	15.51462	17.28267	46.06454	1.30017	1.46446	10.24898	24.29762
25	11.48631	14.92582	16.62990	44.07722	1.24493	1.40225	9.81359	23.27820
26	11.01288	14.37837	16.02509	42.26857	1.19422	1.34513	9.41381	22.31993
27	10.57392	13.86814	15.46313	40.62338	1.14766	1.29268	9.04677	21.41684
28	10.16583	13.39170	14.93964	39.12813	1.10492	1.24454	8.70988	20.56432
29	9.78553	12.94615	14.45100	37.77103	1.06571	1.20038	8.40081	19.75920
30	9.43035	12.52902	13.99408	36.54131	1.02977	1.15989	8.11746	18.99921
31	9.09799	12.13821	13.56621	35.42940	0.99685	1.12281	7.85796	18.28247
32	8.78640	11.77186	13.16504	34.42702	0.96674	1.08890	7.62061	17.60771
33	8.49380	11.42831	12.78856	33.52667	0.93925	1.05793	7.40391	16.97432
34	8.21862	11.10609	12.43493	32.72183	0.91420	1.02972	7.20645	16.38107
35	7.95945	10.80388	12.10258	32.00658	0.89144	1.00409	7.02704	15.82769
36	7.71503	10.52041	11.79004	31.37593	0.87083	0.98087	6.86460	15.31289
37	7.48423	10.25456	11.49601	30.82547	0.85225	0.95994	6.71811	14.83649
38	7.26605	10.00527	11.21927	30.35138	0.83558	0.94117	6.58673	14.39698
39	7.05955	9.77151	10.95868	29.95035	0.82073	0.92445	6.46968	13.99338
40	6.86390	9.55233	10.71322	29.61975	0.80762	0.90967	6.36629	13.62444
41	6.67833	9.34681	10.48189	29.35728	0.79616	0.89676	6.27596	13.28865
42	6.50212	9.15402	10.26372	29.16124	0.78629	0.88565	6.19818	12.98392
43	6.33463	8.97305	10.05780	29.03033	0.77796	0.87627	6.13252	12.70835
44	6.17523	8.80298	9.86323	28.96364	0.77112	0.86857	6.07861	12.45919
45	6.02334	8.64281	9.67911	28.96077	0.76574	0.86250	6.03615	12.23385
46	5.87839	8.49147	9.50452	29.02164	0.76177	0.85803	6.00490	12.02906
47	5.73983	8.34782	9.33849	29.14670	0.75921	0.85515	5.98470	11.84082
48	5.60713	8.21057	9.18008	29.33675	0.75803	0.85382	5.97543	11.66515
49	5.60713	8.21057	9.18008	29.59312	0.75824	0.85405	5.97705	11.66515
50	5.60713	8.21057	9.18008	29.91743	0.75983	0.85584	5.98955	11.66515
51	5.60713	8.21057	9.18008	30.31194	0.76280	0.85919	6.01301	11.66515
52	5.60713	8.21057	9.18008	30.77928	0.76719	0.86413	6.04757	11.66515
53	5.60713	8.21057	9.18008	31.32262	0.77300	0.87068	6.09340	11.66515
54	5.60713	8.21057	9.18008	31.94585	0.78028	0.87888	6.15076	11.66515
55	5.60713	8.21057	9.18008	32.65315	0.78906	0.88877	6.21998	11.66515
56	6.29199	9.40630	10.58273	33.44966	0.79939	0.90040	6.30143	14.47445
57	6.97686	10.60203	11.98536	34.34103	0.81133	0.91386	6.39558	17.28375
58	7.66173	11.79776	13.38801	35.33383	0.82496	0.92920	6.50296	20.09303
59	8.34660	12.99349	14.79065	36.43542	0.84033	0.94652	6.62418	22.90234
60	9.03147	14.18921	16.19327	37.65408	0.85756	0.96592	6.75996	25.71162
61	9.71634	15.38494	17.59590	38.99922	0.87673	0.98752	6.91109	28.52095
62	10.40121	16.58066	18.99852	40.48140	0.89796	1.01143	7.07846	31.33022
63	11.08608	17.77637	20.40117	42.11241	0.92139	1.03782	7.26309	34.13954
64	11.77095	18.97208	21.80379	43.90564	0.94714	1.06683	7.46613	36.94885
65	12.45582	20.16782	23.20642	45.87590	0.97539	1.09864	7.68882	39.75815

Orange 1999 Time Period 2 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	1.87607	2.12034	2.40347	3.99184	2.35405	2.64792	22.51224	0.82775
4	1.71765	1.94285	2.20646	4.03315	2.25491	2.53640	21.56410	0.79173
5	1.62230	1.83604	2.08842	4.07446	2.16300	2.43302	20.68524	0.76184
6	1.55852	1.76473	2.00994	4.11577	2.07780	2.33718	19.87039	0.73761
7	1.51282	1.71381	1.95412	4.15707	1.99878	2.24830	19.11475	0.71858
8	1.47845	1.67572	1.91249	4.19838	1.92551	2.16588	18.41400	0.70432
9	1.45165	1.64626	1.88037	4.23969	1.85755	2.08944	17.76411	0.69442
10	1.43018	1.62287	1.85491	4.28100	1.79454	2.01856	17.16154	0.68845
11	1.41258	1.60395	1.83431	4.32231	1.73613	1.95286	16.60295	0.68605
12	1.39791	1.58840	1.81737	4.36362	1.68201	1.89198	16.08539	0.68683
13	1.38550	1.57546	1.80325	4.40492	1.63189	1.83561	15.60609	0.69044
14	1.37487	1.56460	1.79135	4.44623	1.58551	1.78344	15.16259	0.69655
15	1.36567	1.55539	1.78121	4.48754	1.54265	1.73522	14.75263	0.70483
16	1.35764	1.54753	1.77251	4.52885	1.50307	1.69071	14.37416	0.71498
17	1.35058	1.54079	1.76499	4.57016	1.46659	1.64967	14.02528	0.72671
18	1.34432	1.53498	1.75845	4.61146	1.43303	1.61192	13.70432	0.73974
19	1.33874	1.52994	1.75272	4.65277	1.40222	1.57727	13.40974	0.75383
20	1.34057	1.52551	1.74757	4.69408	1.37403	1.54556	13.14013	0.76873
21	1.34870	1.53268	1.75575	4.73539	1.34832	1.51664	12.89425	0.78422
22	1.35611	1.53933	1.76329	4.77669	1.32497	1.49037	12.67095	0.80010
23	1.36291	1.54550	1.77025	4.81800	1.30387	1.46664	12.46921	0.81617
24	1.36916	1.55125	1.77670	4.85931	1.28494	1.44534	12.28811	0.83226
25	1.37494	1.55661	1.78270	4.90062	1.26807	1.42638	12.12684	0.84822
26	1.38029	1.56163	1.78829	4.94192	1.25321	1.40966	11.98471	0.86391
27	1.38527	1.56633	1.79351	4.98323	1.24028	1.39512	11.86107	0.87920
28	1.38992	1.57074	1.79841	5.02454	1.22923	1.38268	11.75538	0.89398
29	1.39427	1.57489	1.80300	5.06585	1.22001	1.37231	11.66721	0.90817
30	1.39835	1.57878	1.80731	5.10715	1.21258	1.36395	11.59613	0.92169
31	1.40219	1.58244	1.81138	5.14847	1.20691	1.35757	11.54187	0.93449
32	1.40582	1.58589	1.81522	5.18977	1.20297	1.35314	11.50420	0.94652
33	1.40924	1.58914	1.81886	5.23108	1.20074	1.35064	11.48293	0.95775
34	1.41249	1.59221	1.82231	5.27239	1.20023	1.35006	11.47799	0.96819
35	1.41558	1.59510	1.82560	5.31370	1.20141	1.35139	11.48936	0.97783
36	1.41852	1.59785	1.82874	5.35500	1.20431	1.35466	11.51709	0.98671
37	1.42133	1.60045	1.83174	5.39631	1.20893	1.35985	11.56129	0.99486
38	1.42403	1.60293	1.83462	5.43762	1.21530	1.36701	11.62214	1.00234
39	1.42661	1.60530	1.83741	5.47892	1.22343	1.37616	11.69991	1.00924
40	1.42910	1.60757	1.84012	5.52024	1.23337	1.38734	11.79495	1.01563
41	1.43151	1.60976	1.84276	5.56154	1.24516	1.40060	11.90765	1.02162
42	1.43384	1.61189	1.84534	5.60285	1.25884	1.41599	12.03851	1.02735
43	1.43611	1.61396	1.84790	5.64416	1.27448	1.43358	12.18813	1.03294
44	1.43832	1.61601	1.85043	5.68547	1.29215	1.45346	12.35711	1.03857
45	1.44048	1.61804	1.85297	5.72677	1.31193	1.47571	12.54624	1.04439
46	1.44260	1.62008	1.85552	5.76808	1.33390	1.50042	12.75638	1.05060
47	1.44470	1.62214	1.85811	5.80939	1.35817	1.52772	12.98847	1.05741
48	1.44677	1.62424	1.86076	5.85070	1.38485	1.55773	13.24356	1.06504
49	1.44949	1.62754	1.86426	5.89201	1.41405	1.59058	13.52287	1.09972
50	1.54320	1.75083	2.00776	5.93332	1.44593	1.62643	13.82767	1.13440
51	1.59142	1.81413	2.08126	5.97462	1.48062	1.66545	14.15943	1.16908
52	1.63964	1.87743	2.15476	6.01593	1.51829	1.70783	14.51978	1.20376
53	1.68786	1.94072	2.22826	6.05724	1.55915	1.75379	14.91044	1.23844
54	1.73608	2.00402	2.30176	6.09854	1.60337	1.80353	15.33336	1.27313
55	1.78430	2.06731	2.37526	6.13985	1.65119	1.85732	15.79071	1.30781
56	1.83251	2.13061	2.44876	6.18116	1.70286	1.91544	16.28476	1.34249
57	1.88073	2.19390	2.52226	6.22247	1.75864	1.97818	16.81819	1.37717
58	1.92895	2.25720	2.59576	6.26378	1.81882	2.04588	17.39374	1.41185
59	1.97717	2.32050	2.66926	6.30509	1.88374	2.11890	18.01456	1.44653
60	2.02539	2.38379	2.74276	6.34639	1.95374	2.19764	18.68405	1.48121
61	2.07360	2.44709	2.81626	6.38770	2.02923	2.28255	19.40594	1.51588
62	2.12182	2.51039	2.88976	6.42901	2.11063	2.37412	20.18439	1.55056
63	2.17004	2.57368	2.96326	6.47032	2.19842	2.47286	21.02390	1.58524
64	2.21826	2.63698	3.03676	6.51163	2.29311	2.57937	21.92943	1.61992
65	2.26647	2.70027	3.11026	6.55293	2.39528	2.69429	22.90645	1.65460

Orange 1999 Time Period 3 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	9.12400	10.23935	12.08553	20.87469	1.39423	1.92004	5.47708	17.27048
4	6.49641	7.33745	8.61455	16.23972	1.32369	1.82290	5.19997	14.94908
5	5.08085	5.75782	6.72161	13.65629	1.25782	1.73219	4.94122	13.22972
6	4.20425	4.77216	5.53901	11.93909	1.19629	1.64745	4.69948	11.93196
7	3.61111	4.10187	4.73452	10.67141	1.13876	1.56823	4.47350	10.93547
8	3.26789	3.69010	4.23774	9.84102	1.08496	1.49414	4.26214	10.15828
9	3.00268	3.37354	3.85659	9.13351	1.03461	1.42480	4.06434	9.54341
10	2.78374	3.11666	3.54845	8.50630	0.98747	1.35987	3.87913	9.05048
11	2.59847	2.90326	3.29359	7.94619	0.94330	1.29904	3.70562	8.65039
12	2.43847	2.72248	3.07871	7.44313	0.90190	1.24203	3.54299	8.32179
13	2.29788	2.56671	2.89452	6.98923	0.86307	1.18857	3.39048	8.04882
14	2.17253	2.43054	2.73435	6.57809	0.82665	1.13841	3.24739	7.81947
15	2.05935	2.30996	2.59330	6.20441	0.79246	1.09132	3.11308	7.62458
16	1.95606	2.20195	2.46767	5.86373	0.76035	1.04711	2.98694	7.45708
17	1.86088	2.10421	2.35466	5.55230	0.73019	1.00557	2.86845	7.31141
18	1.77246	2.01498	2.25208	5.26686	0.70184	0.96652	2.75708	7.18324
19	1.68971	1.93284	2.15821	5.00460	0.67518	0.92982	2.65236	7.06913
20	1.61242	1.85899	2.07400	4.77257	0.65011	0.89529	2.55387	6.96635
21	1.55115	1.79253	1.99724	4.57337	0.62652	0.86280	2.46121	6.87275
22	1.49494	1.73160	1.92707	4.39089	0.60432	0.83223	2.37399	6.78661
23	1.44313	1.67549	1.86259	4.22350	0.58342	0.80344	2.29188	6.70661
24	1.39517	1.62358	1.80310	4.06973	0.56373	0.77634	2.21456	6.63169
25	1.35061	1.57539	1.74798	3.92827	0.54519	0.75081	2.14173	6.56107
26	1.30905	1.53050	1.69674	3.79798	0.52773	0.72675	2.07312	6.49415
27	1.27015	1.48857	1.64897	3.67783	0.51127	0.70409	2.00847	6.43051
28	1.23366	1.44931	1.60430	3.56691	0.49576	0.68273	1.94755	6.36984
29	1.19931	1.41247	1.56245	3.46439	0.48115	0.66261	1.89014	6.31196
30	1.16690	1.37786	1.52315	3.36954	0.46738	0.64364	1.83604	6.25675
31	1.13626	1.34528	1.48618	3.28170	0.45440	0.62577	1.78506	6.20419
32	1.10721	1.31458	1.45136	3.20028	0.44217	0.60893	1.73702	6.15424
33	1.07963	1.28561	1.41852	3.12476	0.43065	0.59307	1.69176	6.10698
34	1.05339	1.25826	1.38750	3.05465	0.41980	0.57812	1.64914	6.06241
35	1.02837	1.23241	1.35818	2.98952	0.40958	0.56405	1.60900	6.02063
36	1.00449	1.20797	1.33043	2.92898	0.39997	0.55081	1.57122	5.98169
37	0.98165	1.18483	1.30415	2.87269	0.39092	0.53835	1.53568	5.94562
38	0.95977	1.16291	1.27924	2.82033	0.38241	0.52663	1.50226	5.91246
39	0.93878	1.14213	1.25561	2.77160	0.37442	0.51563	1.47087	5.88224
40	0.91862	1.12242	1.23317	2.72626	0.36692	0.50530	1.44140	5.85494
41	0.89923	1.10371	1.21184	2.68408	0.35988	0.49561	1.41376	5.83054
42	0.88055	1.08591	1.19155	2.64483	0.35329	0.48653	1.38787	5.80895
43	0.86254	1.06898	1.17222	2.60833	0.34713	0.47805	1.36366	5.79002
44	0.84514	1.05284	1.15378	2.57441	0.34137	0.47012	1.34105	5.77365
45	0.82831	1.03742	1.13617	2.54292	0.33601	0.46273	1.31997	5.75961
46	0.81202	1.02267	1.11931	2.51371	0.33102	0.45586	1.30037	5.74763
47	0.79621	1.00849	1.10314	2.48666	0.32639	0.44949	1.28220	5.73736
48	0.78118	0.99487	1.08758	2.46161	0.32211	0.44359	1.26538	5.72838
49	0.77799	0.99145	1.08343	2.43827	0.31817	0.43816	1.24988	5.72838
50	0.77498	0.98821	1.07953	2.41712	0.31455	0.43318	1.23567	5.72838
51	0.77214	0.98517	1.07585	2.39806	0.31125	0.42863	1.22269	5.72838
52	0.76946	0.98229	1.07238	2.38100	0.30825	0.42450	1.21091	5.72838
53	0.76692	0.97957	1.06909	2.36585	0.30555	0.42078	1.20030	5.72838
54	0.76452	0.97699	1.06599	2.35254	0.30314	0.41746	1.19083	5.72838
55	0.76225	0.97455	1.06304	2.34102	0.30101	0.41453	1.18248	5.72838
56	0.78244	1.00529	1.09935	2.33122	0.29916	0.41198	1.17522	5.84279
57	0.80273	1.03614	1.13579	2.32311	0.29759	0.40981	1.16903	5.95720
58	0.82313	1.06710	1.17237	2.31665	0.29628	0.40802	1.16389	6.07161
59	0.84363	1.09817	1.20907	2.31182	0.29524	0.40658	1.15981	6.18602
60	0.86421	1.12933	1.24589	2.30861	0.29446	0.40551	1.15675	6.30043
61	0.88487	1.16058	1.28282	2.30699	0.29394	0.40480	1.15471	6.41484
62	0.90562	1.19191	1.31984	2.30698	0.29368	0.40444	1.15370	6.52925
63	0.92643	1.22332	1.35697	2.30858	0.29368	0.40444	1.15370	6.64366
64	0.94732	1.25481	1.39418	2.31181	0.29394	0.40480	1.15471	6.75807
65	0.96827	1.28636	1.43147	2.31668	0.29446	0.40551	1.15675	6.87248

Orange 1999 Time Period 3 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HOGV	LDDV	LDDT	HDDV	MC
3	63.00316	82.04381	99.93172	198.36649	4.92597	5.54844	38.83043	195.85036
4	48.85794	63.60597	77.29393	181.23901	4.53984	5.11351	35.78664	156.19496
5	40.33868	52.36557	63.28503	165.95491	4.19160	4.72126	33.04153	127.57315
6	34.64890	44.81520	53.78700	152.29462	3.87712	4.36704	30.56255	106.45255
7	30.58284	39.41141	46.95274	140.06639	3.59277	4.04676	28.32106	90.54939
8	27.53447	35.36504	41.82124	129.10376	3.33533	3.75679	26.29175	78.35088
9	25.16565	32.22963	37.84108	119.26123	3.10198	3.49396	24.45235	68.83313
10	23.27283	29.73355	34.67288	110.41173	2.89022	3.25544	22.78304	61.28801
11	21.72610	27.70215	32.09668	102.44408	2.69781	3.03872	21.26636	55.21689
12	20.43872	26.01794	29.96393	95.26067	2.52281	2.84160	19.88680	50.26215
13	19.35052	24.59921	28.17072	88.77605	2.36345	2.66210	18.63063	46.16290
14	18.41855	23.38721	26.64244	82.91495	2.21819	2.49849	17.48560	42.72630
15	17.61121	22.33878	25.32430	77.61162	2.08565	2.34920	16.44081	39.80771
16	16.90479	21.42154	24.17517	72.80725	1.96461	2.21286	15.48665	37.29742
17	16.28120	20.61073	23.16368	68.45090	1.85396	2.08823	14.61441	35.11136
18	15.72643	19.88721	22.26550	64.49684	1.75272	1.97421	13.81644	33.18462
19	15.22933	19.23598	21.46162	60.90503	1.66004	1.86981	13.08580	31.46677
20	14.60951	18.56277	20.66762	57.63997	1.57512	1.77416	12.41640	29.91858
21	13.87970	17.74049	19.74117	54.67003	1.49727	1.68647	11.80269	28.50917
22	13.21527	16.98766	18.89665	51.96735	1.42586	1.60603	11.23976	27.21489
23	12.60765	16.29495	18.12311	49.50708	1.36032	1.53222	10.72318	26.01691
24	12.04975	15.65489	17.41147	47.26714	1.30017	1.46446	10.24898	24.90102
25	11.53563	15.06133	16.75427	45.22792	1.24493	1.40225	9.81359	23.85626
26	11.06031	14.50928	16.14529	43.37207	1.19422	1.34513	9.41381	22.87419
27	10.61956	13.99463	15.57944	41.68393	1.14766	1.29268	9.04677	21.94870
28	10.20979	13.51393	15.05228	40.14969	1.10492	1.24454	8.70988	21.07498
29	9.82791	13.06432	14.56019	38.75716	1.06571	1.20038	8.40081	20.24988
30	9.47124	12.64333	14.10004	37.49529	1.02977	1.15989	8.11746	19.47104
31	9.13747	12.24889	13.66912	36.35434	0.99685	1.12281	7.85796	18.73647
32	8.82457	11.87913	13.26511	35.32579	0.96674	1.08890	7.62061	18.04494
33	8.53074	11.53240	12.88595	34.40196	0.93925	1.05793	7.40391	17.39584
34	8.25441	11.20727	12.52984	33.57610	0.91420	1.02972	7.20645	16.78786
35	7.99418	10.90238	12.19516	32.84218	0.89144	1.00409	7.02704	16.22073
36	7.74877	10.61648	11.88046	32.19507	0.87083	0.98087	6.86460	15.69316
37	7.51707	10.34845	11.58443	31.63023	0.85225	0.95994	6.71811	15.20492
38	7.29805	10.09723	11.30584	31.14377	0.83558	0.94117	6.58673	14.75449
39	7.09078	9.86178	11.04356	30.73228	0.82073	0.92445	6.46968	14.34087
40	6.89442	9.64114	10.79653	30.39305	0.80762	0.90967	6.36629	13.96277
41	6.70821	9.43439	10.56378	30.12373	0.79616	0.89676	6.27596	13.61865
42	6.53143	9.24057	10.34429	29.92259	0.78629	0.88565	6.19818	13.30635
43	6.36341	9.05877	10.13719	29.78825	0.77796	0.87627	6.13252	13.02394
44	6.20354	8.88804	9.94152	29.71979	0.77112	0.86857	6.07861	12.76859
45	6.05122	8.72738	9.75642	29.71684	0.76574	0.86250	6.03615	12.53765
46	5.90587	8.57565	9.58092	29.77927	0.76177	0.85803	6.00490	12.32778
47	5.76694	8.43168	9.41406	29.90761	0.75921	0.85515	5.98470	12.13486
48	5.63389	8.29417	9.25486	30.10265	0.75803	0.85382	5.97543	11.95483
49	5.63389	8.29417	9.25486	30.36569	0.75824	0.85405	5.97705	11.95483
50	5.63389	8.29417	9.25486	30.69850	0.75983	0.85584	5.98955	11.95483
51	5.63389	8.29417	9.25486	31.10330	0.76280	0.85919	6.01301	11.95483
52	5.63389	8.29417	9.25486	31.58282	0.76719	0.86413	6.04757	11.95483
53	5.63389	8.29417	9.25486	32.14034	0.77300	0.87068	6.09340	11.95483
54	5.63389	8.29417	9.25486	32.77986	0.78028	0.87888	6.15076	11.95483
55	5.63389	8.29417	9.25486	33.50562	0.78906	0.88877	6.21998	11.95483
56	6.32508	9.51012	10.67560	34.32297	0.79939	0.90040	6.30143	14.83390
57	7.01627	10.72607	12.09633	35.23759	0.81133	0.91386	6.39558	17.71295
58	7.70747	11.94203	13.51706	36.25630	0.82496	0.92920	6.50296	20.59200
59	8.39866	13.15799	14.93780	37.38664	0.84033	0.94652	6.62418	23.47105
60	9.08986	14.37394	16.35851	38.63713	0.85756	0.96592	6.75996	26.35011
61	9.78105	15.58989	17.77924	40.01738	0.87673	0.98752	6.91109	29.22920
62	10.47225	16.80583	19.19995	41.53822	0.89796	1.01143	7.07846	32.10825
63	11.16344	18.02176	20.62068	43.21185	0.92139	1.03782	7.26309	34.98734
64	11.85463	19.23772	22.04141	45.05190	0.94714	1.06683	7.46613	37.86641
65	12.54583	20.45367	23.46213	47.07356	0.97539	1.09864	7.68882	40.74545

Orange 1999 Time Period 3 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	1.87781	2.12123	2.40314	3.98210	2.35405	2.64792	22.51224	0.81913
4	1.71917	1.94358	2.20593	4.02331	2.25491	2.53640	21.56410	0.78349
5	1.62369	1.83668	2.08777	4.06452	2.16300	2.43302	20.68524	0.75391
6	1.55984	1.76531	2.00921	4.10573	2.07780	2.33718	19.87039	0.72993
7	1.51409	1.71436	1.95332	4.14693	1.99878	2.24830	19.11475	0.71110
8	1.47968	1.67624	1.91165	4.18814	1.92551	2.16588	18.41400	0.69700
9	1.45286	1.64675	1.87948	4.22935	1.85755	2.08944	17.76411	0.68719
10	1.43137	1.62335	1.85398	4.27055	1.79454	2.01856	17.16154	0.68129
11	1.41376	1.60441	1.83335	4.31176	1.73613	1.95286	16.60295	0.67891
12	1.39908	1.58885	1.81637	4.35297	1.68201	1.89198	16.08539	0.67968
13	1.38666	1.57590	1.80222	4.39418	1.63189	1.83561	15.60609	0.68326
14	1.37602	1.56501	1.79028	4.43538	1.58551	1.78344	15.16259	0.68930
15	1.36682	1.55579	1.78011	4.47659	1.54265	1.73522	14.75263	0.69750
16	1.35878	1.54792	1.77138	4.51780	1.50307	1.69071	14.37416	0.70754
17	1.35172	1.54116	1.76383	4.55900	1.46659	1.64967	14.02528	0.71914
18	1.34545	1.53534	1.75725	4.60021	1.43303	1.61192	13.70432	0.73204
19	1.33988	1.53028	1.75150	4.64142	1.40222	1.57727	13.40974	0.74598
20	1.34171	1.52583	1.74630	4.68263	1.37403	1.54556	13.14013	0.76073
21	1.34986	1.53299	1.75446	4.72383	1.34832	1.51664	12.89425	0.77606
22	1.35729	1.53962	1.76197	4.76504	1.32497	1.49037	12.67095	0.79177
23	1.36410	1.54578	1.76890	4.80625	1.30387	1.46664	12.46921	0.80768
24	1.37036	1.55151	1.77532	4.84745	1.28494	1.44534	12.28811	0.82360
25	1.37615	1.55686	1.78129	4.88866	1.26807	1.42638	12.12684	0.83940
26	1.38151	1.56187	1.78686	4.92987	1.25321	1.40966	11.98471	0.85492
27	1.38650	1.56656	1.79206	4.97107	1.24028	1.39512	11.86107	0.87005
28	1.39116	1.57095	1.79693	5.01228	1.22923	1.38268	11.75538	0.88468
29	1.39551	1.57508	1.80150	5.05349	1.22001	1.37231	11.66721	0.89872
30	1.39960	1.57896	1.80579	5.09469	1.21258	1.36395	11.59613	0.91210
31	1.40344	1.58261	1.80984	5.13590	1.20691	1.35757	11.54187	0.92477
32	1.40707	1.58605	1.81366	5.17711	1.20297	1.35314	11.50420	0.93667
33	1.41050	1.58929	1.81728	5.21832	1.20074	1.35064	11.48293	0.94779
34	1.41375	1.59234	1.82071	5.25952	1.20023	1.35006	11.47799	0.95811
35	1.41684	1.59523	1.82397	5.30073	1.20141	1.35139	11.48936	0.96766
36	1.41978	1.59796	1.82709	5.34194	1.20431	1.35466	11.51709	0.97644
37	1.42259	1.60056	1.83007	5.38314	1.20893	1.35985	11.56129	0.98451
38	1.42528	1.60302	1.83294	5.42435	1.21530	1.36701	11.62214	0.99191
39	1.42786	1.60538	1.83571	5.46556	1.22343	1.37616	11.69991	0.99874
40	1.43035	1.60764	1.83839	5.50677	1.23337	1.38734	11.79495	1.00506
41	1.43275	1.60982	1.84101	5.54797	1.24516	1.40060	11.90765	1.01099
42	1.43508	1.61193	1.84358	5.58918	1.25884	1.41599	12.03851	1.01666
43	1.43734	1.61400	1.84611	5.63039	1.27448	1.43358	12.18813	1.02219
44	1.43954	1.61603	1.84862	5.67160	1.29215	1.45346	12.35711	1.02776
45	1.44170	1.61805	1.85113	5.71280	1.31193	1.47571	12.54624	1.03352
46	1.44381	1.62007	1.85366	5.75401	1.33390	1.50042	12.75638	1.03967
47	1.44589	1.62212	1.85622	5.79521	1.35817	1.52772	12.98847	1.04641
48	1.44795	1.62420	1.85883	5.83642	1.38485	1.55773	13.24356	1.05396
49	1.44961	1.62749	1.86222	5.87763	1.41405	1.59058	13.52287	1.06288
50	1.45144	1.63078	1.86562	5.91884	1.44593	1.62643	13.82767	1.07260
51	1.45328	1.63406	1.86902	5.96004	1.48062	1.66545	14.15943	1.08362
52	1.45512	1.63735	1.87242	6.00125	1.51829	1.70783	14.51978	1.09594
53	1.45696	1.64063	1.87582	6.04246	1.55915	1.75379	14.91044	1.10966
54	1.45880	1.64392	1.87922	6.08366	1.60337	1.80353	15.33336	1.12468
55	1.46064	1.64721	1.88262	6.12487	1.65119	1.85732	15.79071	1.14090
56	1.46248	1.65050	1.88602	6.16608	1.70286	1.91544	16.28476	1.15842
57	1.46432	1.65378	1.88942	6.20729	1.75864	1.97818	16.81819	1.17714
58	1.46616	1.65707	1.89281	6.24849	1.81882	2.04588	17.39374	1.19716
59	1.46800	1.66036	1.89621	6.28970	1.88374	2.11890	18.01456	1.21848
60	1.46984	1.66364	1.89961	6.33091	1.95374	2.19764	18.68405	1.24100
61	1.47168	1.66693	1.90301	6.37212	2.02923	2.28255	19.40594	1.26482
62	1.47352	1.67022	1.90641	6.41332	2.11063	2.37412	20.18439	1.29004
63	1.47536	1.67350	1.90981	6.45453	2.19842	2.47286	21.02390	1.31676
64	1.47720	1.67679	1.91321	6.49574	2.29311	2.57937	21.92943	1.34498
65	1.47904	1.68008	1.91661	6.53695	2.39528	2.69429	22.90645	1.37470

Orange 1999 Time Period 4 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	6.84573	8.41039	10.02070	14.73378	1.39423	1.92004	5.47708	15.15242
4	5.03313	6.22260	7.40018	12.09479	1.32369	1.82290	5.19997	12.80548
5	4.02301	4.98352	5.90455	10.48512	1.25782	1.73219	4.94122	11.06722
6	3.38188	4.18823	4.93977	9.32974	1.19629	1.64745	4.69948	9.75519
7	2.93986	3.63583	4.26785	8.42391	1.13876	1.56823	4.47350	8.74776
8	2.65944	3.27493	3.82411	7.75942	1.08496	1.49414	4.26214	7.96202
9	2.44255	2.99403	3.47961	7.18030	1.03461	1.42480	4.06434	7.34040
10	2.26595	2.76485	3.20007	6.66307	0.98747	1.35987	3.87913	6.84205
11	2.11867	2.57334	2.96794	6.19889	0.94330	1.29904	3.70562	6.43757
12	1.99337	2.41010	2.77139	5.78071	0.90190	1.24203	3.54299	6.10536
13	1.88498	2.26854	2.60214	5.40278	0.86307	1.18857	3.39048	5.82939
14	1.78986	2.14396	2.45426	5.06028	0.82665	1.13841	3.24739	5.59751
15	1.70535	2.03290	2.32337	4.74914	0.79246	1.09132	3.11308	5.40048
16	1.62944	1.93275	2.20617	4.46587	0.76035	1.04711	2.98694	5.23113
17	1.56060	1.84153	2.10016	4.20742	0.73019	1.00557	2.86845	5.08387
18	1.49764	1.75770	2.00338	3.97117	0.70184	0.96652	2.75708	4.95428
19	1.43963	1.68003	1.91431	3.75481	0.67518	0.92982	2.65236	4.83892
20	1.37992	1.61132	1.83531	3.56047	0.65011	0.89529	2.55387	4.73501
21	1.32589	1.55236	1.76611	3.38843	0.62652	0.86280	2.46121	4.64039
22	1.27646	1.49838	1.70286	3.23089	0.60432	0.83223	2.37399	4.55330
23	1.23103	1.44873	1.64476	3.08645	0.58342	0.80344	2.29188	4.47242
24	1.18911	1.40286	1.59116	2.95385	0.56373	0.77634	2.21456	4.39668
25	1.15028	1.36032	1.54152	2.83198	0.54519	0.75081	2.14173	4.32528
26	1.11417	1.32076	1.49539	2.71986	0.52773	0.72675	2.07312	4.25763
27	1.08050	1.28385	1.45238	2.61661	0.51127	0.70409	2.00847	4.19328
28	1.04901	1.24933	1.41220	2.52142	0.49576	0.68273	1.94755	4.13195
29	1.01947	1.21698	1.37456	2.43358	0.48115	0.66261	1.89014	4.07344
30	0.99169	1.18661	1.33923	2.35247	0.46738	0.64364	1.83604	4.01762
31	0.96551	1.15806	1.30603	2.27750	0.45440	0.62577	1.78506	3.96447
32	0.94079	1.13118	1.27478	2.20817	0.44217	0.60893	1.73702	3.91398
33	0.91739	1.10585	1.24532	2.14401	0.43065	0.59307	1.69176	3.86620
34	0.89520	1.08194	1.21754	2.08460	0.41980	0.57812	1.64914	3.82114
35	0.87413	1.05937	1.19130	2.02956	0.40958	0.56405	1.60900	3.77890
36	0.85408	1.03803	1.16651	1.97856	0.39997	0.55081	1.57122	3.73953
37	0.83498	1.01784	1.14306	1.93129	0.39092	0.53835	1.53568	3.70306
38	0.81675	0.99874	1.12087	1.88747	0.38241	0.52663	1.50226	3.66954
39	0.79932	0.98063	1.09985	1.84686	0.37442	0.51563	1.47087	3.63899
40	0.78265	0.96346	1.07993	1.80921	0.36692	0.50530	1.44140	3.61138
41	0.76667	0.94717	1.06104	1.77434	0.35988	0.49561	1.41376	3.58672
42	0.75133	0.93169	1.04309	1.74206	0.35329	0.48653	1.38787	3.56489
43	0.73659	0.91696	1.02604	1.71220	0.34713	0.47805	1.36366	3.54575
44	0.72241	0.90293	1.00980	1.68461	0.34137	0.47012	1.34105	3.52921
45	0.70875	0.88953	0.99433	1.65915	0.33601	0.46273	1.31997	3.51501
46	0.69557	0.87672	0.97954	1.63570	0.33102	0.45586	1.30037	3.50290
47	0.68283	0.86442	0.96538	1.61416	0.32639	0.44949	1.28220	3.49252
48	0.67070	0.85265	0.95182	1.59444	0.32211	0.44359	1.26538	3.48344
49	0.66902	0.85086	0.94969	1.57659	0.31817	0.43816	1.24988	3.48344
50	0.66744	0.84918	0.94769	1.56055	0.31455	0.43318	1.23567	3.48344
51	0.66595	0.84759	0.94580	1.54623	0.31125	0.42863	1.22269	3.48344
52	0.66453	0.84608	0.94401	1.53357	0.30825	0.42450	1.21091	3.48344
53	0.66320	0.84466	0.94232	1.52251	0.30555	0.42078	1.20030	3.48344
54	0.66193	0.84330	0.94072	1.51298	0.30314	0.41746	1.19083	3.48344
55	0.66072	0.84202	0.93920	1.50495	0.30101	0.41453	1.18248	3.48344
56	0.68121	0.87166	0.97560	1.49838	0.29916	0.41198	1.17522	3.59911
57	0.70175	0.90136	1.01206	1.49323	0.29759	0.40981	1.16903	3.71477
58	0.72234	0.93111	1.04860	1.48949	0.29628	0.40802	1.16389	3.83044
59	0.74298	0.96092	1.08519	1.48715	0.29524	0.40658	1.15981	3.94611
60	0.76366	0.99077	1.12185	1.48618	0.29446	0.40551	1.15675	4.06178
61	0.78439	1.02067	1.15856	1.48660	0.29394	0.40480	1.15471	4.17745
62	0.80516	1.05062	1.19532	1.48841	0.29368	0.40444	1.15370	4.29311
63	0.82597	1.08060	1.23213	1.49161	0.29368	0.40444	1.15370	4.40878
64	0.84682	1.11062	1.26898	1.49624	0.29394	0.40480	1.15471	4.52445
65	0.86769	1.14068	1.30588	1.50232	0.29446	0.40551	1.15675	4.64011

Orange 1999 Time Period 4 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	60.20644	75.56445	92.02715	156.39586	4.92597	5.54844	38.83043	158.07491
4	46.74068	58.62119	71.25366	142.89224	4.53984	5.11351	35.78664	126.06819
5	38.64110	48.34106	58.45076	130.84196	4.19160	4.72126	33.04153	102.96693
6	33.23494	41.45117	49.78931	120.07191	3.87712	4.36704	30.56255	85.92006
7	29.37221	36.52298	43.56284	110.43095	3.59277	4.04676	28.32106	73.08427
8	26.47588	32.83099	38.88837	101.78780	3.33533	3.75679	26.29175	63.23857
9	24.22452	29.96701	35.26140	94.02779	3.10198	3.49396	24.45235	55.55663
10	22.42484	27.68369	32.37253	87.05066	2.89022	3.25544	22.78304	49.46678
11	20.95358	25.82248	30.02158	80.76880	2.69781	3.03872	21.26636	44.56671
12	19.72852	24.27702	28.07364	75.10527	2.52281	2.84160	19.88680	40.56757
13	18.69264	22.97340	26.43446	69.99271	2.36345	2.66210	18.63063	37.25903
14	17.80519	21.85863	25.03642	65.37170	2.21819	2.49849	17.48560	34.48524
15	17.03632	20.89375	23.82985	61.19043	2.08565	2.34920	16.44081	32.12961
16	16.36357	20.04959	22.77748	57.40259	1.96461	2.21286	15.48665	30.10352
17	15.76981	19.30377	21.85085	53.96796	1.85396	2.08823	14.61441	28.33908
18	15.24169	18.63904	21.02792	50.85051	1.75272	1.97421	13.81644	26.78397
19	14.76872	18.04178	20.29143	48.01863	1.66004	1.86981	13.08580	25.39746
20	14.17040	17.40869	19.54501	45.44443	1.57512	1.77416	12.41640	24.14789
21	13.45964	16.62640	18.66440	43.10287	1.49727	1.68647	11.80269	23.01036
22	12.81289	15.91182	17.86205	40.97202	1.42586	1.60603	11.23976	21.96570
23	12.22177	15.25595	17.12749	39.03224	1.36032	1.53222	10.72318	20.99884
24	11.67935	14.65145	16.45212	37.26631	1.30017	1.46446	10.24898	20.09814
25	11.17978	14.09230	15.82880	35.65855	1.24493	1.40225	9.81359	19.25490
26	10.71817	13.57350	15.25157	34.19533	1.19422	1.34513	9.41381	18.46227
27	10.29036	13.09088	14.71550	32.86440	1.14766	1.29268	9.04677	17.71526
28	9.89278	12.64093	14.21637	31.65474	1.10492	1.24454	8.70988	17.01007
29	9.52240	12.22069	13.75064	30.55682	1.06571	1.20038	8.40081	16.34412
30	9.17655	11.82759	13.31527	29.56197	1.02977	1.15989	8.11746	15.71549
31	8.85295	11.45946	12.90762	28.66246	0.99685	1.12281	7.85796	15.12263
32	8.54957	11.11436	12.52543	27.85150	0.96674	1.08890	7.62061	14.56446
33	8.26465	10.79058	12.16670	27.12315	0.93925	1.05793	7.40391	14.04056
34	7.99663	10.48660	11.82966	26.47203	0.91420	1.02972	7.20645	13.54984
35	7.74411	10.20107	11.51275	25.89340	0.89144	1.00409	7.02704	13.09209
36	7.50585	9.93273	11.21453	25.38319	0.87083	0.98087	6.86460	12.66627
37	7.28074	9.68043	10.93376	24.93787	0.85225	0.95994	6.71811	12.27221
38	7.06779	9.44315	10.66924	24.55432	0.83558	0.94117	6.58673	11.90866
39	6.86609	9.21990	10.41989	24.22989	0.82073	0.92445	6.46968	11.57482
40	6.67481	9.00976	10.18472	23.96242	0.80762	0.90967	6.36629	11.26965
41	6.49322	8.81187	9.96278	23.75012	0.79616	0.89676	6.27596	10.99190
42	6.32063	8.62540	9.75315	23.59151	0.78629	0.88565	6.19818	10.73983
43	6.15640	8.44952	9.55500	23.48560	0.77796	0.87627	6.13252	10.51189
44	5.99996	8.28345	9.36746	23.43166	0.77112	0.86857	6.07861	10.30579
45	5.85075	8.12634	9.18974	23.42931	0.76574	0.86250	6.03615	10.11940
46	5.70825	7.97733	9.02099	23.47856	0.76177	0.85803	6.00490	9.95001
47	5.57196	7.83549	8.86034	23.57974	0.75921	0.85515	5.98470	9.79430
48	5.44140	7.69985	8.70695	23.73349	0.75803	0.85382	5.97543	9.64900
49	5.44140	7.69985	8.70695	23.94089	0.75824	0.85405	5.97705	9.64900
50	5.44140	7.69985	8.70695	24.20328	0.75983	0.85584	5.98955	9.64900
51	5.44140	7.69985	8.70695	24.52242	0.76280	0.85919	6.01301	9.64900
52	5.44140	7.69985	8.70695	24.90051	0.76719	0.86413	6.04757	9.64900
53	5.44140	7.69985	8.70695	25.34006	0.77300	0.87068	6.09340	9.64900
54	5.44140	7.69985	8.70695	25.84425	0.78028	0.87888	6.15076	9.64900
55	5.44140	7.69985	8.70695	26.41646	0.78906	0.88877	6.21998	9.64900
56	6.08704	8.77163	9.99433	27.06084	0.79939	0.90040	6.30143	11.97275
57	6.73267	9.84340	11.28169	27.78195	0.81133	0.91386	6.39558	14.29651
58	7.37831	10.91518	12.56906	28.58513	0.82496	0.92920	6.50296	16.62025
59	8.02395	11.98697	13.85644	29.47632	0.84033	0.94652	6.62418	18.94402
60	8.66958	13.05874	15.14381	30.46223	0.85756	0.96592	6.75996	21.26776
61	9.31522	14.13052	16.43117	31.55045	0.87673	0.98752	6.91109	23.59149
62	9.96086	15.20230	17.71851	32.74953	0.89796	1.01143	7.07846	25.91524
63	10.60650	16.27406	19.00587	34.06898	0.92139	1.03782	7.26309	28.23901
64	11.25213	17.34583	20.29324	35.51974	0.94714	1.06683	7.46613	30.56276
65	11.89777	18.41760	21.58061	37.11369	0.97539	1.09864	7.68882	32.88649

Orange 1999 Time Period 4 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	1.86196	2.11495	2.41114	4.09885	2.35405	2.64792	22.51224	0.90987
4	1.70551	1.93876	2.21572	4.14126	2.25491	2.53640	21.56410	0.87028
5	1.61125	1.83266	2.09864	4.18368	2.16300	2.43302	20.68524	0.83742
6	1.54813	1.76178	2.02083	4.22609	2.07780	2.33718	19.87039	0.81079
7	1.50286	1.71114	1.96553	4.26851	1.99878	2.24830	19.11475	0.78987
8	1.46878	1.67325	1.92434	4.31092	1.92551	2.16588	18.41400	0.77420
9	1.44217	1.64395	1.89260	4.35334	1.85755	2.08944	17.76411	0.76331
10	1.42083	1.62070	1.86749	4.39575	1.79454	2.01856	17.16154	0.75676
11	1.40333	1.60190	1.84723	4.43817	1.73613	1.95286	16.60295	0.75411
12	1.38872	1.58647	1.83061	4.48058	1.68201	1.89198	16.08539	0.75497
13	1.37636	1.57365	1.81680	4.52300	1.63189	1.83561	15.60609	0.75894
14	1.36577	1.56290	1.80520	4.56541	1.58551	1.78344	15.16259	0.76566
15	1.35659	1.55381	1.79537	4.60783	1.54265	1.73522	14.75263	0.77476
16	1.34858	1.54607	1.78697	4.65025	1.50307	1.69071	14.37416	0.78591
17	1.34154	1.53946	1.77975	4.69266	1.46659	1.64967	14.02528	0.79880
18	1.33530	1.53377	1.77350	4.73507	1.43303	1.61192	13.70432	0.81313
19	1.32974	1.52886	1.76807	4.77749	1.40222	1.57727	13.40974	0.82862
20	1.33148	1.52466	1.76331	4.81990	1.37403	1.54556	13.14013	0.84500
21	1.33945	1.53198	1.77180	4.86232	1.34832	1.51664	12.89425	0.86203
22	1.34672	1.53876	1.77962	4.90473	1.32497	1.49037	12.67095	0.87948
23	1.35338	1.54508	1.78687	4.94715	1.30387	1.46664	12.46921	0.89714
24	1.35952	1.55096	1.79360	4.98956	1.28494	1.44534	12.28811	0.91483
25	1.36520	1.55646	1.79986	5.03198	1.26807	1.42638	12.12684	0.93238
26	1.37047	1.56162	1.80571	5.07439	1.25321	1.40966	11.98471	0.94962
27	1.37537	1.56645	1.81118	5.11681	1.24028	1.39512	11.86107	0.96643
28	1.37996	1.57099	1.81632	5.15922	1.22923	1.38268	11.75538	0.98268
29	1.38425	1.57526	1.82115	5.20164	1.22001	1.37231	11.66721	0.99828
30	1.38829	1.57928	1.82569	5.24405	1.21258	1.36395	11.59613	1.01314
31	1.39210	1.58307	1.82998	5.28647	1.20691	1.35757	11.54187	1.02720
32	1.39569	1.58663	1.83404	5.32888	1.20297	1.35314	11.50420	1.04042
33	1.39910	1.59000	1.83789	5.37130	1.20074	1.35064	11.48293	1.05277
34	1.40234	1.59318	1.84155	5.41371	1.20023	1.35006	11.47799	1.06424
35	1.40543	1.59619	1.84504	5.45613	1.20141	1.35139	11.48936	1.07484
36	1.40838	1.59905	1.84838	5.49854	1.20431	1.35466	11.51709	1.08460
37	1.41121	1.60176	1.85158	5.54096	1.20893	1.35985	11.56129	1.09356
38	1.41393	1.60435	1.85467	5.58338	1.21530	1.36701	11.62214	1.10179
39	1.41655	1.60683	1.85766	5.62579	1.22343	1.37616	11.69991	1.10937
40	1.41908	1.60921	1.86058	5.66821	1.23337	1.38734	11.79495	1.11639
41	1.42154	1.61152	1.86343	5.71062	1.24516	1.40060	11.90765	1.12298
42	1.42393	1.61377	1.86624	5.75304	1.25884	1.41599	12.03851	1.12927
43	1.42626	1.61597	1.86903	5.79545	1.27448	1.43358	12.18813	1.13542
44	1.42855	1.61814	1.87182	5.83787	1.29215	1.45346	12.35711	1.14161
45	1.43080	1.62032	1.87462	5.88028	1.31193	1.47571	12.54624	1.14801
46	1.43303	1.62251	1.87746	5.92270	1.33390	1.50042	12.75638	1.15484
47	1.43523	1.62473	1.88036	5.96511	1.35817	1.52772	12.98847	1.16232
48	1.43742	1.62701	1.88334	6.00753	1.38485	1.55773	13.24356	1.17071
49	1.48550	1.69050	1.95798	6.04994	1.41405	1.59058	13.52287	1.20883
50	1.53357	1.75399	2.03263	6.09236	1.44593	1.62643	13.82767	1.24695
51	1.58165	1.81748	2.10728	6.13477	1.48062	1.66545	14.15943	1.28507
52	1.62972	1.88096	2.18193	6.17719	1.51829	1.70783	14.51978	1.32319
53	1.67780	1.94445	2.25658	6.21960	1.55915	1.75379	14.91044	1.36131
54	1.72587	2.00794	2.33123	6.26202	1.60337	1.80353	15.33336	1.39943
55	1.77395	2.07143	2.40588	6.30443	1.65119	1.85732	15.79071	1.43755
56	1.82202	2.13492	2.48053	6.34685	1.70286	1.91544	16.28476	1.47568
57	1.87010	2.19841	2.55518	6.38926	1.75864	1.97818	16.81819	1.51380
58	1.91817	2.26190	2.62983	6.43168	1.81882	2.04588	17.39374	1.55192
59	1.96625	2.32539	2.70448	6.47410	1.88374	2.11890	18.01456	1.59004
60	2.01432	2.38888	2.77913	6.51651	1.95374	2.19764	18.68405	1.62816
61	2.06240	2.45237	2.85378	6.55893	2.02923	2.28255	19.40594	1.66628
62	2.11047	2.51586	2.92843	6.60134	2.11063	2.37412	20.18439	1.70440
63	2.15855	2.57935	3.00308	6.64376	2.19842	2.47286	21.02390	1.74252
64	2.20662	2.64284	3.07773	6.68617	2.29311	2.57937	21.92943	1.78064
65	2.25469	2.70632	3.15238	6.72859	2.39528	2.69429	22.90645	1.81876

Orange 2006 Time Period 1 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HGTV	LDDV	LDDT	HDDV	MC
3	5.63190	5.90240	5.34178	9.30282	1.06409	1.44138	4.46347	14.00430
4	4.13125	4.33050	3.91883	7.65440	1.01025	1.36845	4.23764	11.80171
5	3.30681	3.46066	3.13117	6.64087	0.95998	1.30036	4.02678	10.17036
6	2.78884	2.91133	2.63362	5.90887	0.91302	1.23674	3.82978	8.93903
7	2.43437	2.53391	2.29171	5.33238	0.86912	1.17727	3.64562	7.99355
8	2.20755	2.28843	2.06923	4.90616	0.82805	1.12165	3.47337	7.25614
9	2.03304	2.09868	1.89724	4.53415	0.78962	1.06960	3.31218	6.67274
10	1.89209	1.94495	1.75789	4.20174	0.75364	1.02086	3.16125	6.20505
11	1.77554	1.81743	1.64230	3.90331	0.71993	0.97520	3.01985	5.82544
12	1.67730	1.70955	1.54450	3.63439	0.68834	0.93240	2.88731	5.51366
13	1.59314	1.61678	1.46041	3.39132	0.65871	0.89226	2.76302	5.25466
14	1.52003	1.53589	1.38708	3.17103	0.63091	0.85460	2.64641	5.03705
15	1.45578	1.46450	1.32236	2.97090	0.60481	0.81926	2.53696	4.85214
16	1.39872	1.40082	1.26463	2.78869	0.58031	0.78606	2.43417	4.69321
17	1.34758	1.34351	1.21267	2.62247	0.55729	0.75488	2.33760	4.55500
18	1.30137	1.29149	1.16551	2.47054	0.53565	0.72557	2.24684	4.43339
19	1.25932	1.24393	1.12239	2.33142	0.51530	0.69801	2.16151	4.32512
20	1.20825	1.19277	1.07574	2.20638	0.49617	0.67209	2.08124	4.22760
21	1.15739	1.14624	1.03334	2.09556	0.47817	0.64771	2.00573	4.13879
22	1.11104	1.10387	0.99475	1.99407	0.46122	0.62475	1.93465	4.05707
23	1.06861	1.06513	0.95945	1.90103	0.44527	0.60315	1.86773	3.98116
24	1.02961	1.02956	0.92704	1.81562	0.43025	0.58280	1.80472	3.91007
25	0.99364	0.99678	0.89718	1.73713	0.41610	0.56363	1.74537	3.84307
26	0.96033	0.96647	0.86957	1.66492	0.40277	0.54557	1.68946	3.77957
27	0.92940	0.93835	0.84395	1.59843	0.39021	0.52856	1.63677	3.71919
28	0.90059	0.91219	0.82012	1.53714	0.37837	0.51253	1.58713	3.66163
29	0.87368	0.88779	0.79789	1.48059	0.36722	0.49742	1.54035	3.60671
30	0.84849	0.86498	0.77711	1.42837	0.35671	0.48318	1.49626	3.55433
31	0.82483	0.84358	0.75762	1.38012	0.34680	0.46977	1.45471	3.50445
32	0.80258	0.82349	0.73931	1.33550	0.33747	0.45713	1.41556	3.45706
33	0.78160	0.80457	0.72207	1.29422	0.32868	0.44522	1.37868	3.41222
34	0.76179	0.78672	0.70582	1.25600	0.32040	0.43400	1.34394	3.36994
35	0.74303	0.76985	0.69045	1.22061	0.31260	0.42343	1.31123	3.33030
36	0.72525	0.75389	0.67591	1.18781	0.30526	0.41349	1.28044	3.29334
37	0.70836	0.73875	0.66211	1.15742	0.29835	0.40414	1.25148	3.25912
38	0.69229	0.72436	0.64901	1.12926	0.29186	0.39535	1.22425	3.22766
39	0.67699	0.71069	0.63655	1.10316	0.28576	0.38708	1.19866	3.19899
40	0.66238	0.69766	0.62468	1.07898	0.28004	0.37933	1.17465	3.17308
41	0.64843	0.68523	0.61337	1.05659	0.27467	0.37205	1.15212	3.14993
42	0.63509	0.67337	0.60256	1.03587	0.26964	0.36524	1.13103	3.12945
43	0.62230	0.66202	0.59222	1.01671	0.26493	0.35887	1.11129	3.11149
44	0.61005	0.65116	0.58233	0.99901	0.26054	0.35292	1.09287	3.09596
45	0.59828	0.64075	0.57284	0.98269	0.25645	0.34737	1.07570	3.08263
46	0.58697	0.63076	0.56375	0.96767	0.25264	0.34222	1.05972	3.07127
47	0.57608	0.62117	0.55501	0.95388	0.24911	0.33743	1.04491	3.06152
48	0.56564	0.61194	0.54660	0.94125	0.24584	0.33301	1.03120	3.05301
49	0.56418	0.61054	0.54534	0.92985	0.24283	0.32893	1.01858	3.05301
50	0.56281	0.60921	0.54414	0.91960	0.24007	0.32519	1.00699	3.05301
51	0.56151	0.60797	0.54302	0.91047	0.23755	0.32177	0.99641	3.05301
52	0.56029	0.60679	0.54196	0.90240	0.23526	0.31867	0.98681	3.05301
53	0.55913	0.60568	0.54095	0.89535	0.23320	0.31588	0.97817	3.05301
54	0.55803	0.60462	0.54000	0.88929	0.23136	0.31339	0.97045	3.05301
55	0.55700	0.60362	0.53910	0.88419	0.22973	0.31119	0.96364	3.05301
56	0.57263	0.61786	0.55176	0.88004	0.22832	0.30928	0.95773	3.16156
57	0.58831	0.63214	0.56446	0.87680	0.22712	0.30765	0.95268	3.27011
58	0.60404	0.64647	0.57720	0.87446	0.22612	0.30630	0.94850	3.37866
59	0.61981	0.66083	0.58998	0.87302	0.22533	0.30522	0.94517	3.48722
60	0.63562	0.67524	0.60279	0.87247	0.22473	0.30442	0.94268	3.59577
61	0.65147	0.68969	0.61564	0.87282	0.22434	0.30388	0.94102	3.70432
62	0.66736	0.70417	0.62852	0.87405	0.22414	0.30361	0.94019	3.81288
63	0.68328	0.71868	0.64142	0.87619	0.22414	0.30361	0.94019	3.92143
64	0.69923	0.73322	0.65436	0.87925	0.22434	0.30388	0.94102	4.02999
65	0.71521	0.74779	0.66732	0.88324	0.22473	0.30442	0.94268	4.13854

Orange 2006 Time Period 1 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HGCV	LDDV	LDDT	HDDV	MC
3	53.58311	52.60132	47.37968	73.03871	4.34232	4.79962	35.02310	153.16731
4	41.99881	41.45581	37.37331	66.73232	4.00194	4.42339	32.27773	122.15428
5	35.04825	34.76852	31.36946	61.10474	3.69496	4.08408	29.80179	99.77023
6	30.41454	30.31032	27.36691	56.07503	3.41774	3.77767	27.56586	83.25261
7	27.10472	27.12592	24.50795	51.57259	3.16708	3.50061	25.54414	70.81532
8	24.62241	24.73758	22.36374	47.53612	2.94014	3.24978	23.71381	61.27530
9	22.69167	22.88002	20.69603	43.91208	2.73445	3.02242	22.05475	53.83183
10	21.14713	21.39395	19.36185	40.65370	2.54777	2.81608	20.54912	47.93109
11	19.88338	20.17809	18.27023	37.72002	2.37817	2.62861	19.18115	43.18311
12	18.83026	19.16484	17.36057	35.07506	2.22389	2.45810	17.93686	39.30818
13	17.93918	18.30753	16.59087	32.68744	2.08342	2.30283	16.80388	36.10231
14	17.17537	17.57265	15.93112	30.52939	1.95537	2.16129	15.77112	33.41469
15	16.51343	16.93578	15.35931	28.57669	1.83853	2.03216	14.82878	31.13214
16	15.93423	16.37849	14.85899	26.80772	1.73183	1.91421	13.96816	29.16895
17	15.42315	15.88681	14.41754	25.20370	1.63429	1.80640	13.18145	27.45930
18	14.96887	15.44973	14.02513	23.74782	1.54505	1.70777	12.46171	25.95248
19	14.56240	15.05866	13.67403	22.42531	1.46335	1.61746	11.80272	24.60901
20	13.95414	14.49467	13.16099	21.22313	1.38849	1.53472	11.19896	23.39816
21	13.17446	13.74145	12.47346	20.12958	1.31986	1.45886	10.64542	22.29599
22	12.46566	13.05670	11.84842	19.13446	1.25691	1.38928	10.13769	21.28378
23	11.81849	12.43149	11.27774	18.22858	1.19914	1.32543	9.67176	20.34691
24	11.22526	11.85838	10.75461	17.40385	1.14612	1.26682	9.24405	19.47420
25	10.67949	11.33112	10.27333	16.65303	1.09743	1.21300	8.85135	18.65712
26	10.17569	10.84442	9.82908	15.96970	1.05272	1.16359	8.49078	17.88910
27	9.70922	10.39377	9.41773	15.34813	1.01168	1.11822	8.15972	17.16528
28	9.27606	9.97531	9.03576	14.78321	0.97400	1.07658	7.85586	16.48199
29	8.87278	9.58571	8.68014	14.27048	0.93944	1.03837	7.57710	15.83671
30	8.49638	9.22208	8.34822	13.80586	0.90776	1.00335	7.32154	15.22759
31	8.14426	8.88192	8.03772	13.38576	0.87874	0.97128	7.08748	14.65313
32	7.81416	8.56301	7.74663	13.00705	0.85220	0.94194	6.87340	14.11230
33	7.50406	8.26343	7.47317	12.66690	0.82796	0.91515	6.67795	13.60466
34	7.21220	7.98147	7.21581	12.36281	0.80588	0.89075	6.49985	13.12917
35	6.93701	7.71563	6.97315	12.09258	0.78582	0.86857	6.33803	12.68564
36	6.67712	7.46455	6.74397	11.85431	0.76765	0.84849	6.19152	12.27304
37	6.43127	7.22705	6.52717	11.64633	0.75127	0.83039	6.05939	11.89120
38	6.19837	7.00204	6.32179	11.46722	0.73658	0.81415	5.94089	11.53894
39	5.97741	6.78858	6.12694	11.31570	0.72349	0.79968	5.83532	11.21547
40	5.76749	6.58578	5.94184	11.19079	0.71193	0.78690	5.74207	10.91977
41	5.56782	6.39288	5.76576	11.09164	0.70183	0.77574	5.66060	10.65064
42	5.37765	6.20917	5.59807	11.01757	0.69313	0.76612	5.59045	10.40640
43	5.19633	6.03400	5.43817	10.96811	0.68579	0.75801	5.53123	10.18554
44	5.02325	5.86679	5.28555	10.94291	0.67976	0.75134	5.48260	9.98584
45	4.85786	5.70702	5.13971	10.94182	0.67501	0.74609	5.44430	9.80523
46	4.69967	5.55419	5.00021	10.96482	0.67151	0.74223	5.41612	9.64110
47	4.54820	5.40786	4.86664	11.01207	0.66925	0.73974	5.39789	9.49023
48	4.40305	5.26763	4.73864	11.08388	0.66822	0.73859	5.38953	9.34943
49	4.40305	5.26763	4.73864	11.18074	0.66840	0.73879	5.39099	9.34943
50	4.40305	5.26763	4.73864	11.30327	0.66980	0.74033	5.40227	9.34943
51	4.40305	5.26763	4.73864	11.45231	0.67242	0.74323	5.42343	9.34943
52	4.40305	5.26763	4.73864	11.62889	0.67629	0.74751	5.45460	9.34943
53	4.40305	5.26763	4.73864	11.83417	0.68141	0.75317	5.49594	9.34943
54	4.40305	5.26763	4.73864	12.06963	0.68782	0.76026	5.54768	9.34943
55	4.40305	5.26763	4.73864	12.33686	0.69557	0.76882	5.61011	9.34943
56	4.82434	5.73194	5.14557	12.63779	0.70467	0.77888	5.68357	11.60105
57	5.24564	6.19624	5.55251	12.97457	0.71520	0.79052	5.76848	13.85267
58	5.66694	6.66055	5.95944	13.34966	0.72721	0.80379	5.86534	16.10428
59	6.08823	7.12486	6.36638	13.76586	0.74077	0.81878	5.97467	18.35588
60	6.50952	7.58916	6.77331	14.22629	0.75595	0.83556	6.09713	20.60747
61	6.93082	8.05347	7.18024	14.73450	0.77285	0.85424	6.23345	22.85907
62	7.35212	8.51777	7.58717	15.29448	0.79157	0.87493	6.38441	25.11069
63	7.77342	8.98208	7.99411	15.91070	0.81221	0.89775	6.55094	27.36229
64	8.19471	9.44638	8.40104	16.58820	0.83492	0.92285	6.73407	29.61391
65	8.61601	9.91069	8.80797	17.33258	0.85982	0.95037	6.93492	31.86552

Orange 2006 Time Period 1 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	1.70689	1.73166	1.71644	3.45725	1.85341	2.07334	13.01564	0.91266
4	1.56015	1.58279	1.56888	3.49302	1.77534	1.98602	12.46746	0.87295
5	1.47210	1.49346	1.48034	3.52880	1.70299	1.90508	11.95933	0.83999
6	1.41340	1.43392	1.42132	3.56458	1.63590	1.83003	11.48821	0.81327
7	1.37148	1.39138	1.37916	3.60035	1.57369	1.76044	11.05134	0.79230
8	1.34003	1.35948	1.34753	3.63613	1.51600	1.69590	10.64618	0.77658
9	1.31557	1.33467	1.32294	3.67191	1.46250	1.63605	10.27046	0.76565
10	1.29601	1.31482	1.30326	3.70768	1.41289	1.58055	9.92207	0.75908
11	1.28000	1.29858	1.28717	3.74346	1.36690	1.52911	9.59912	0.75643
12	1.26666	1.28504	1.27375	3.77923	1.32429	1.48144	9.29988	0.75729
13	1.25537	1.27359	1.26240	3.81501	1.28483	1.43729	9.02277	0.76127
14	1.24570	1.26378	1.25267	3.85078	1.24832	1.39645	8.76636	0.76800
15	1.23731	1.25527	1.24424	3.88656	1.21456	1.35869	8.52933	0.77713
16	1.22997	1.24783	1.23686	3.92234	1.18340	1.32384	8.31051	0.78832
17	1.22350	1.24126	1.23035	3.95811	1.15468	1.29171	8.10881	0.80125
18	1.21775	1.23542	1.22456	3.99389	1.12826	1.26215	7.92325	0.81563
19	1.21260	1.23020	1.21939	4.02966	1.10400	1.23501	7.75293	0.83116
20	1.21532	1.22261	1.21170	4.06544	1.08181	1.21019	7.59706	0.84759
21	1.22315	1.22454	1.21341	4.10121	1.06157	1.18754	7.45490	0.86467
22	1.23026	1.22631	1.21496	4.13699	1.04318	1.16697	7.32579	0.88217
23	1.23675	1.22791	1.21638	4.17277	1.02657	1.14839	7.20916	0.89989
24	1.24271	1.22939	1.21768	4.20854	1.01166	1.13171	7.10445	0.91764
25	1.24818	1.23074	1.21888	4.24432	0.99839	1.11686	7.01122	0.93524
26	1.25324	1.23199	1.21998	4.28009	0.98669	1.10377	6.92904	0.95253
27	1.25792	1.23315	1.22100	4.31587	0.97651	1.09238	6.85756	0.96939
28	1.26227	1.23423	1.22195	4.35164	0.96781	1.08265	6.79646	0.98569
29	1.26632	1.23523	1.22284	4.38742	0.96055	1.07453	6.74548	1.00134
30	1.27010	1.23616	1.22366	4.42320	0.95469	1.06798	6.70438	1.01624
31	1.27363	1.23704	1.22443	4.45897	0.95023	1.06299	6.67301	1.03035
32	1.27694	1.23786	1.22515	4.49475	0.94712	1.05952	6.65123	1.04361
33	1.28005	1.23863	1.22583	4.53053	0.94537	1.05756	6.63894	1.05600
34	1.28298	1.23936	1.22647	4.56630	0.94497	1.05710	6.63608	1.06750
35	1.28574	1.24004	1.22708	4.60208	0.94590	1.05815	6.64265	1.07814
36	1.28835	1.24069	1.22765	4.63785	0.94819	1.06070	6.65868	1.08793
37	1.29082	1.24129	1.22818	4.67363	0.95182	1.06477	6.68423	1.09692
38	1.29316	1.24187	1.22869	4.70940	0.95684	1.07038	6.71942	1.10517
39	1.29537	1.24242	1.22918	4.74518	0.96324	1.07754	6.76438	1.11277
40	1.29748	1.24295	1.22964	4.78096	0.97106	1.08630	6.81933	1.11981
41	1.29949	1.24344	1.23008	4.81673	0.98034	1.09668	6.88449	1.12642
42	1.30139	1.24391	1.23049	4.85251	0.99112	1.10873	6.96015	1.13274
43	1.30321	1.24437	1.23089	4.88828	1.00343	1.12251	7.04665	1.13891
44	1.30495	1.24480	1.23127	4.92406	1.01734	1.13807	7.14435	1.14511
45	1.30661	1.24520	1.23163	4.95984	1.03291	1.15549	7.25369	1.15153
46	1.30820	1.24560	1.23198	4.99561	1.05022	1.17484	7.37519	1.15838
47	1.30972	1.24598	1.23231	5.03138	1.06932	1.19622	7.50937	1.16589
48	1.31118	1.24634	1.23263	5.06716	1.09032	1.21971	7.65685	1.17430
49	1.34967	1.29297	1.27861	5.10294	1.11332	1.24543	7.81834	1.21254
50	1.38816	1.33961	1.32460	5.13871	1.13841	1.27351	7.99456	1.25078
51	1.42665	1.38625	1.37058	5.17449	1.16573	1.30406	8.18637	1.28901
52	1.46514	1.43289	1.41656	5.21027	1.19539	1.33725	8.39471	1.32725
53	1.50363	1.47953	1.46255	5.24604	1.22756	1.37323	8.62057	1.36549
54	1.54212	1.52617	1.50853	5.28182	1.26237	1.41218	8.86509	1.40373
55	1.58061	1.57281	1.55452	5.31759	1.30003	1.45430	9.12951	1.44196
56	1.61911	1.61945	1.60050	5.35337	1.34070	1.49980	9.41516	1.48020
57	1.65760	1.66609	1.64648	5.38914	1.38462	1.54893	9.72356	1.51844
58	1.69609	1.71273	1.69247	5.42492	1.43200	1.60194	10.05632	1.55668
59	1.73458	1.75937	1.73845	5.46070	1.48311	1.65911	10.41525	1.59492
60	1.77307	1.80601	1.78444	5.49647	1.53823	1.72077	10.80233	1.63315
61	1.81156	1.85265	1.83042	5.53225	1.59767	1.78726	11.21970	1.67139
62	1.85005	1.89929	1.87640	5.56802	1.66176	1.85895	11.66976	1.70963
63	1.88855	1.94593	1.92239	5.60380	1.73087	1.93627	12.15513	1.74787
64	1.92704	1.99257	1.96837	5.63958	1.80542	2.01967	12.67868	1.78610
65	1.96553	2.03921	2.01435	5.67535	1.88586	2.10965	13.24356	1.82434

Orange 2006 Time Period 2 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDBG	LDDV	LDDT	HDDV	MC
3	6.84029	6.80292	6.13998	11.88383	1.06409	1.44138	4.46347	15.63705
4	4.87047	4.84731	4.37498	9.34238	1.01025	1.36845	4.23764	13.45820
5	3.82050	3.80056	3.42961	7.90056	0.95998	1.30036	4.02678	11.84443
6	3.17549	3.15547	2.84670	6.92682	0.91302	1.23674	3.82978	10.62637
7	2.74170	2.72054	2.45354	6.19858	0.86912	1.17727	3.64562	9.69108
8	2.48404	2.45383	2.21214	5.70941	0.82805	1.12165	3.47337	8.96162
9	2.28664	2.24962	2.02727	5.29027	0.78962	1.06960	3.31218	8.38451
10	2.12607	2.08455	1.87784	4.91792	0.75364	1.02086	3.16125	7.92186
11	1.99230	1.94796	1.75418	4.58489	0.71993	0.97520	3.01985	7.54634
12	1.87862	1.83273	1.64985	4.28548	0.68834	0.93240	2.88731	7.23792
13	1.78040	1.73392	1.56039	4.01512	0.65871	0.89226	2.76302	6.98171
14	1.69432	1.64801	1.48261	3.77013	0.63091	0.85460	2.64641	6.76645
15	1.61796	1.57244	1.41418	3.54740	0.60481	0.81926	2.53696	6.58353
16	1.54949	1.50525	1.35334	3.34434	0.58031	0.78606	2.43417	6.42631
17	1.48752	1.44497	1.29875	3.15873	0.55729	0.75488	2.33760	6.28959
18	1.43098	1.39045	1.24937	2.98865	0.53565	0.72557	2.24684	6.16929
19	1.37899	1.34077	1.20439	2.83244	0.51530	0.69801	2.16151	6.06219
20	1.32062	1.28727	1.15566	2.69390	0.49617	0.67209	2.08124	5.96572
21	1.26618	1.23785	1.11069	2.57439	0.47817	0.64771	2.00573	5.87787
22	1.21650	1.19284	1.06973	2.46492	0.46122	0.62475	1.93465	5.79702
23	1.17097	1.15166	1.03226	2.36450	0.44527	0.60315	1.86773	5.72193
24	1.12907	1.11384	0.99785	2.27225	0.43025	0.58280	1.80472	5.65161
25	1.09035	1.07898	0.96612	2.18740	0.41610	0.56363	1.74537	5.58533
26	1.05446	1.04673	0.93677	2.10926	0.40277	0.54557	1.68946	5.52252
27	1.02108	1.01680	0.90954	2.03722	0.39021	0.52856	1.63677	5.46279
28	0.98995	0.98895	0.88420	1.97073	0.37837	0.51253	1.58713	5.40584
29	0.96082	0.96295	0.86054	1.90928	0.36722	0.49742	1.54035	5.35152
30	0.93350	0.93863	0.83841	1.85246	0.35671	0.48318	1.49626	5.29970
31	0.90781	0.91583	0.81766	1.79985	0.34680	0.46977	1.45471	5.25037
32	0.88360	0.89439	0.79815	1.75110	0.33747	0.45713	1.41556	5.20349
33	0.86073	0.87419	0.77977	1.70590	0.32868	0.44522	1.37868	5.15913
34	0.83910	0.85513	0.76243	1.66396	0.32040	0.43400	1.34394	5.11730
35	0.81858	0.83711	0.74604	1.62502	0.31260	0.42343	1.31123	5.07808
36	0.79909	0.82005	0.73050	1.58884	0.30526	0.41349	1.28044	5.04153
37	0.78055	0.80385	0.71577	1.55522	0.29835	0.40414	1.25148	5.00768
38	0.76288	0.78846	0.70177	1.52396	0.29186	0.39535	1.22425	4.97655
39	0.74601	0.77382	0.68844	1.49490	0.28576	0.38708	1.19866	4.94819
40	0.72989	0.75986	0.67574	1.46787	0.28004	0.37933	1.17465	4.92256
41	0.71445	0.74654	0.66362	1.44274	0.27467	0.37205	1.15212	4.89967
42	0.69965	0.73381	0.65204	1.41938	0.26964	0.36524	1.13103	4.87940
43	0.68545	0.72164	0.64096	1.39768	0.26493	0.35887	1.11129	4.86163
44	0.67180	0.70997	0.63035	1.37753	0.26054	0.35292	1.09287	4.84627
45	0.65867	0.69879	0.62017	1.35884	0.25645	0.34737	1.07570	4.83309
46	0.64602	0.68805	0.61040	1.34152	0.25264	0.34222	1.05972	4.82185
47	0.63382	0.67773	0.60101	1.32551	0.24911	0.33743	1.04491	4.81221
48	0.62212	0.66777	0.59195	1.31073	0.24584	0.33301	1.03120	4.80378
49	0.61966	0.66541	0.58983	1.29715	0.24283	0.32893	1.01858	4.80378
50	0.61734	0.66318	0.58783	1.28487	0.24007	0.32519	1.00699	4.80378
51	0.61515	0.66109	0.58595	1.27383	0.23755	0.32177	0.99641	4.80378
52	0.61308	0.65911	0.58418	1.26397	0.23526	0.31867	0.98681	4.80378
53	0.61113	0.65724	0.58250	1.25525	0.23320	0.31588	0.97817	4.80378
54	0.60929	0.65548	0.58091	1.24763	0.23136	0.31339	0.97045	4.80378
55	0.60754	0.65380	0.57941	1.24106	0.22973	0.31119	0.96364	4.80378
56	0.62250	0.66740	0.59150	1.23553	0.22832	0.30928	0.95773	4.91116
57	0.63755	0.68107	0.60366	1.23100	0.22712	0.30765	0.95268	5.01855
58	0.65267	0.69483	0.61589	1.22746	0.22612	0.30630	0.94850	5.12593
59	0.66787	0.70865	0.62818	1.22488	0.22533	0.30522	0.94517	5.23332
60	0.68314	0.72254	0.64053	1.22328	0.22473	0.30442	0.94268	5.34070
61	0.69847	0.73649	0.65294	1.22263	0.22434	0.30388	0.94102	5.44808
62	0.71386	0.75050	0.66539	1.22295	0.22414	0.30361	0.94019	5.55547
63	0.72931	0.76457	0.67790	1.22424	0.22414	0.30361	0.94019	5.66285
64	0.74481	0.77868	0.69046	1.22650	0.22434	0.30388	0.94102	5.77023
65	0.76036	0.79284	0.70305	1.22975	0.22473	0.30442	0.94268	5.87762

Orange 2006 Time Period 2 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	53.58311	52.60132	47.37968	77.74860	4.34232	4.79962	35.02310	186.22520
4	41.99881	41.45581	37.37331	71.03554	4.00194	4.42339	32.27773	148.51868
5	35.04825	34.76852	31.36946	65.04506	3.69496	4.08408	29.80179	121.30351
6	30.41454	30.31032	27.36691	59.69099	3.41774	3.77767	27.56586	101.22092
7	27.10472	27.12592	24.50795	54.89824	3.16708	3.50061	25.54414	86.09929
8	24.62241	24.73758	22.36374	50.60147	2.94014	3.24978	23.71381	74.50029
9	22.69167	22.88002	20.69603	46.74374	2.73445	3.02242	22.05475	65.45029
10	21.14713	21.39395	19.36185	43.27525	2.54777	2.81608	20.54912	58.27599
11	19.88338	20.17809	18.27023	40.15239	2.37817	2.62861	19.18115	52.50322
12	18.83026	19.16484	17.36057	37.33687	2.22389	2.45810	17.93686	47.79199
13	17.93918	18.30753	16.59087	34.79529	2.08342	2.30283	16.80388	43.89421
14	17.17537	17.57265	15.93112	32.49808	1.95537	2.16129	15.77112	40.62651
15	16.51343	16.93578	15.35931	30.41946	1.83853	2.03216	14.82878	37.85135
16	15.93423	16.37849	14.85899	28.53641	1.73183	1.91421	13.96816	35.46443
17	15.42315	15.88681	14.41754	26.82896	1.63429	1.80640	13.18145	33.38580
18	14.96887	15.44973	14.02513	25.27919	1.54505	1.70777	12.46171	31.55377
19	14.56240	15.05866	13.67403	23.87140	1.46335	1.61746	11.80272	29.92033
20	13.95414	14.49467	13.16099	22.59171	1.38849	1.53472	11.19896	28.44821
21	13.17446	13.74145	12.47346	21.42763	1.31986	1.45886	10.64542	27.10811
22	12.46566	13.05670	11.84842	20.36835	1.25691	1.38928	10.13769	25.87741
23	11.81849	12.43149	11.27774	19.40404	1.19914	1.32543	9.67176	24.73836
24	11.22526	11.85838	10.75461	18.52612	1.14612	1.26682	9.24405	23.67726
25	10.67949	11.33112	10.27333	17.72690	1.09743	1.21300	8.85135	22.68385
26	10.17569	10.84442	9.82908	16.99950	1.05272	1.16359	8.49078	21.75008
27	9.70922	10.39377	9.41773	16.33784	1.01168	1.11822	8.15972	20.87001
28	9.27606	9.97531	9.03576	15.73651	0.97400	1.07658	7.85586	20.03926
29	8.87278	9.58571	8.68014	15.19071	0.93944	1.03837	7.57710	19.25468
30	8.49638	9.22208	8.34822	14.69613	0.90776	1.00335	7.32154	18.51411
31	8.14426	8.88192	8.03772	14.24895	0.87874	0.97128	7.08748	17.81569
32	7.81416	8.56301	7.74663	13.84582	0.85220	0.94194	6.87340	17.15813
33	7.50406	8.26343	7.47317	13.48372	0.82796	0.91515	6.67795	16.54092
34	7.21220	7.98147	7.21581	13.16002	0.80588	0.89075	6.49985	15.96282
35	6.93701	7.71563	6.97315	12.87237	0.78582	0.86857	6.33803	15.42356
36	6.67712	7.46455	6.74397	12.61874	0.76765	0.84849	6.19152	14.92191
37	6.43127	7.22705	6.52717	12.39735	0.75127	0.83039	6.05939	14.45767
38	6.19837	7.00204	6.32179	12.20668	0.73658	0.81415	5.94089	14.02938
39	5.97741	6.78858	6.12694	12.04540	0.72349	0.79968	5.83532	13.63609
40	5.76749	6.58578	5.94184	11.91244	0.71193	0.78690	5.74207	13.27657
41	5.56782	6.39288	5.76576	11.80689	0.70183	0.77574	5.66060	12.94936
42	5.37765	6.20917	5.59807	11.72804	0.69313	0.76612	5.59045	12.65240
43	5.19633	6.03400	5.43817	11.67539	0.68579	0.75801	5.53123	12.38387
44	5.02325	5.86679	5.28555	11.64857	0.67976	0.75134	5.48260	12.14107
45	4.85786	5.70702	5.13971	11.64741	0.67501	0.74609	5.44430	11.92148
46	4.69967	5.55419	5.00021	11.67188	0.67151	0.74223	5.41612	11.72193
47	4.54820	5.40786	4.86664	11.72218	0.66925	0.73974	5.39789	11.53849
48	4.40305	5.26763	4.73864	11.79863	0.66822	0.73859	5.38953	11.36731
49	4.40305	5.26763	4.73864	11.90173	0.66840	0.73879	5.39099	11.36731
50	4.40305	5.26763	4.73864	12.03216	0.66980	0.74033	5.40227	11.36731
51	4.40305	5.26763	4.73864	12.19082	0.67242	0.74323	5.42343	11.36731
52	4.40305	5.26763	4.73864	12.37878	0.67629	0.74751	5.45460	11.36731
53	4.40305	5.26763	4.73864	12.59730	0.68141	0.75317	5.49594	11.36731
54	4.40305	5.26763	4.73864	12.84794	0.68782	0.76026	5.54768	11.36731
55	4.40305	5.26763	4.73864	13.13241	0.69557	0.76882	5.61011	11.36731
56	4.82434	5.73194	5.14557	13.45275	0.70467	0.77888	5.68357	14.10488
57	5.24564	6.19624	5.55251	13.81124	0.71520	0.79052	5.76848	16.84245
58	5.66694	6.66055	5.95944	14.21052	0.72721	0.80379	5.86534	19.58000
59	6.08823	7.12486	6.36638	14.65355	0.74077	0.81878	5.97467	22.31760
60	6.50952	7.58916	6.77331	15.14367	0.75595	0.83556	6.09713	25.05515
61	6.93082	8.05347	7.18024	15.68465	0.77285	0.85424	6.23345	27.79274
62	7.35212	8.51777	7.58717	16.28073	0.79157	0.87493	6.38441	30.53027
63	7.77342	8.98208	7.99411	16.93669	0.81221	0.89775	6.55094	33.26787
64	8.19471	9.44638	8.40104	17.65787	0.83492	0.92285	6.73407	36.00545
65	8.61601	9.91069	8.80797	18.45026	0.85982	0.95037	6.93492	38.74301

Orange 2006 Time Period 2 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	1.73345	1.75816	1.74207	3.49236	1.85341	2.07334	13.01564	0.82775
4	1.58442	1.60701	1.59230	3.52850	1.77534	1.98602	12.46746	0.79173
5	1.49501	1.51632	1.50244	3.56464	1.70299	1.90508	11.95933	0.76184
6	1.43540	1.45586	1.44253	3.60078	1.63590	1.83003	11.48821	0.73761
7	1.39282	1.41267	1.39974	3.63692	1.57369	1.76044	11.05134	0.71858
8	1.36088	1.38029	1.36765	3.67306	1.51600	1.69590	10.64618	0.70432
9	1.33604	1.35509	1.34269	3.70920	1.46250	1.63605	10.27046	0.69442
10	1.31617	1.33494	1.32272	3.74534	1.41289	1.58055	9.92207	0.68845
11	1.29992	1.31845	1.30638	3.78148	1.36690	1.52911	9.59912	0.68605
12	1.28637	1.30471	1.29276	3.81762	1.32429	1.48144	9.29988	0.68683
13	1.27491	1.29308	1.28124	3.85375	1.28483	1.43729	9.02277	0.69044
14	1.26508	1.28312	1.27137	3.88989	1.24832	1.39645	8.76636	0.69655
15	1.25657	1.27448	1.26281	3.92603	1.21456	1.35869	8.52933	0.70483
16	1.24911	1.26692	1.25532	3.96217	1.18340	1.32384	8.31051	0.71498
17	1.24254	1.26025	1.24872	3.99831	1.15468	1.29171	8.10881	0.72671
18	1.23669	1.25432	1.24284	4.03445	1.12826	1.26215	7.92325	0.73974
19	1.23147	1.24902	1.23759	4.07059	1.10400	1.23501	7.75293	0.75383
20	1.23423	1.24132	1.22979	4.10673	1.08181	1.21019	7.59706	0.76873
21	1.24218	1.24328	1.23152	4.14286	1.06157	1.18754	7.45490	0.78422
22	1.24940	1.24506	1.23310	4.17900	1.04318	1.16697	7.32579	0.80010
23	1.25600	1.24669	1.23453	4.21515	1.02657	1.14839	7.20916	0.81617
24	1.26204	1.24819	1.23585	4.25128	1.01166	1.13171	7.10445	0.83226
25	1.26760	1.24956	1.23706	4.28742	0.99839	1.11686	7.01122	0.84822
26	1.27274	1.25083	1.23818	4.32356	0.98669	1.10377	6.92904	0.86391
27	1.27750	1.25200	1.23922	4.35970	0.97651	1.09238	6.85756	0.87920
28	1.28191	1.25309	1.24018	4.39584	0.96781	1.08265	6.79646	0.89398
29	1.28602	1.25411	1.24108	4.43198	0.96055	1.07453	6.74548	0.90817
30	1.28986	1.25506	1.24191	4.46812	0.95469	1.06798	6.70438	0.92169
31	1.29345	1.25594	1.24270	4.50426	0.95023	1.06299	6.67301	0.93449
32	1.29681	1.25678	1.24343	4.54040	0.94712	1.05952	6.65123	0.94652
33	1.29997	1.25756	1.24412	4.57654	0.94537	1.05756	6.63894	0.95775
34	1.30294	1.25829	1.24477	4.61268	0.94497	1.05710	6.63608	0.96819
35	1.30575	1.25899	1.24538	4.64882	0.94590	1.05815	6.64265	0.97783
36	1.30840	1.25964	1.24595	4.68496	0.94819	1.06070	6.65868	0.98671
37	1.31090	1.26026	1.24650	4.72109	0.95182	1.06477	6.68423	0.99486
38	1.31328	1.26084	1.24702	4.75723	0.95684	1.07038	6.71942	1.00234
39	1.31553	1.26140	1.24751	4.79337	0.96324	1.07754	6.76438	1.00924
40	1.31767	1.26193	1.24798	4.82951	0.97106	1.08630	6.81933	1.01563
41	1.31970	1.26243	1.24842	4.86565	0.98034	1.09668	6.88449	1.02162
42	1.32164	1.26291	1.24884	4.90179	0.99112	1.10873	6.96015	1.02735
43	1.32349	1.26337	1.24924	4.93793	1.00343	1.12251	7.04665	1.03294
44	1.32525	1.26380	1.24963	4.97407	1.01734	1.13807	7.14435	1.03857
45	1.32694	1.26422	1.25000	5.01021	1.03291	1.15549	7.25369	1.04439
46	1.32855	1.26462	1.25035	5.04635	1.05022	1.17484	7.37519	1.05060
47	1.33010	1.26500	1.25068	5.08249	1.06932	1.19622	7.50937	1.05741
48	1.33158	1.26537	1.25101	5.11863	1.09032	1.21971	7.65685	1.06504
49	1.33706	1.31272	1.29767	5.15477	1.11332	1.24543	7.81834	1.09972
50	1.40975	1.36007	1.34434	5.19091	1.13841	1.27351	7.99456	1.13440
51	1.44884	1.40742	1.39101	5.22704	1.16573	1.30406	8.18637	1.16908
52	1.48793	1.45477	1.43768	5.26319	1.19539	1.33725	8.39471	1.20376
53	1.52702	1.50212	1.48435	5.29932	1.22756	1.37323	8.62057	1.23844
54	1.56611	1.54947	1.53102	5.33546	1.26237	1.41218	8.86509	1.27312
55	1.60520	1.59682	1.57769	5.37160	1.30003	1.45430	9.12951	1.30780
56	1.64429	1.64417	1.62436	5.40774	1.34070	1.49980	9.41516	1.34248
57	1.68338	1.69152	1.67102	5.44388	1.38462	1.54893	9.72356	1.37716
58	1.72247	1.73887	1.71769	5.48002	1.43200	1.60194	10.05632	1.41185
59	1.76156	1.78622	1.76436	5.51616	1.48311	1.65911	10.41525	1.44653
60	1.80065	1.83357	1.81103	5.55230	1.53823	1.72077	10.80233	1.48120
61	1.83974	1.88092	1.85770	5.58844	1.59767	1.78726	11.21970	1.51589
62	1.87883	1.92827	1.90437	5.62458	1.66176	1.85895	11.66976	1.55057
63	1.91792	1.97562	1.95103	5.66072	1.73087	1.93627	12.15513	1.58525
64	1.95701	2.02297	1.99771	5.69685	1.80542	2.01967	12.67868	1.61993
65	1.99610	2.07032	2.04437	5.73299	1.88586	2.10965	13.24356	1.65461

Orange 2006 Time Period 3 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	7.12600	7.01648	6.32969	12.47642	1.06409	1.44138	4.46347	15.83453
4	5.04392	4.96867	4.48249	9.72033	1.01025	1.36845	4.23764	13.65727
5	3.93998	3.87933	3.49917	8.17507	0.95998	1.30036	4.02678	12.04469
6	3.26457	3.21117	2.89570	7.14260	0.91302	1.23674	3.82978	10.82753
7	2.81179	2.76235	2.49017	6.37721	0.86912	1.17727	3.64562	9.89292
8	2.54669	2.49056	2.24425	5.87215	0.82805	1.12165	3.47337	9.16400
9	2.34374	2.28290	2.05631	5.44098	0.78962	1.06960	3.31218	8.58732
10	2.17841	2.11513	1.90448	5.05838	0.75364	1.02086	3.16125	8.12500
11	2.04044	1.97638	1.77890	4.71644	0.71993	0.97520	3.01985	7.74976
12	1.92300	1.85940	1.67302	4.40914	0.68834	0.93240	2.88731	7.44157
13	1.82135	1.75916	1.58228	4.13172	0.65871	0.89226	2.76302	7.18555
14	1.73210	1.67207	1.50346	3.88032	0.63091	0.85460	2.64641	6.97044
15	1.65277	1.59550	1.43415	3.65172	0.60481	0.81926	2.53696	6.78766
16	1.58150	1.52749	1.37258	3.44325	0.58031	0.78606	2.43417	6.63055
17	1.51687	1.46652	1.31737	3.25261	0.55729	0.75488	2.33760	6.49393
18	1.45778	1.41141	1.26748	3.07782	0.53565	0.72557	2.24684	6.37372
19	1.40335	1.36125	1.22207	2.91718	0.51530	0.69801	2.16151	6.26670
20	1.34319	1.30718	1.17284	2.77514	0.49617	0.67209	2.08124	6.17030
21	1.28792	1.25703	1.12722	2.65336	0.47817	0.64771	2.00573	6.08252
22	1.23747	1.21135	1.08566	2.54181	0.46122	0.62475	1.93465	6.00173
23	1.19122	1.16955	1.04764	2.43947	0.44527	0.60315	1.86773	5.92669
24	1.14865	1.13116	1.01271	2.34544	0.43025	0.58280	1.80472	5.85643
25	1.10930	1.09576	0.98051	2.25895	0.41610	0.56363	1.74537	5.79019
26	1.07282	1.06301	0.95072	2.17928	0.40277	0.54557	1.68946	5.72743
27	1.03888	1.03262	0.92306	2.10581	0.39021	0.52856	1.63677	5.66774
28	1.00721	1.00432	0.89732	2.03798	0.37837	0.51253	1.58713	5.61084
29	0.97757	0.97791	0.87330	1.97528	0.36722	0.49742	1.54035	5.55656
30	0.94976	0.95319	0.85081	1.91728	0.35671	0.48318	1.49626	5.50478
31	0.92361	0.93001	0.82972	1.86356	0.34680	0.46977	1.45471	5.45547
32	0.89895	0.90821	0.80989	1.81378	0.33747	0.45713	1.41556	5.40863
33	0.87566	0.88768	0.79121	1.76759	0.32868	0.44522	1.37868	5.36430
34	0.85362	0.86830	0.77358	1.72472	0.32040	0.43400	1.34394	5.32250
35	0.83270	0.84997	0.75691	1.68488	0.31260	0.42343	1.31123	5.28332
36	0.81283	0.83260	0.74111	1.64787	0.30526	0.41349	1.28044	5.24680
37	0.79392	0.81612	0.72612	1.61344	0.29835	0.40414	1.25148	5.21296
38	0.77589	0.80045	0.71187	1.58142	0.29186	0.39535	1.22425	5.18187
39	0.75867	0.78554	0.69830	1.55162	0.28576	0.38708	1.19866	5.15352
40	0.74220	0.77133	0.68537	1.52390	0.28004	0.37933	1.17465	5.12792
41	0.72643	0.75776	0.67303	1.49810	0.27467	0.37205	1.15212	5.10503
42	0.71131	0.74479	0.66123	1.47410	0.26964	0.36524	1.13103	5.08479
43	0.69679	0.73238	0.64994	1.45178	0.26493	0.35887	1.11129	5.06703
44	0.68283	0.72048	0.63912	1.43104	0.26054	0.35292	1.09287	5.05168
45	0.66940	0.70908	0.62875	1.41178	0.25645	0.34737	1.07570	5.03851
46	0.65645	0.69813	0.61878	1.39392	0.25264	0.34222	1.05972	5.02728
47	0.64397	0.68760	0.60921	1.37739	0.24911	0.33743	1.04491	5.01764
48	0.63198	0.67742	0.59996	1.36209	0.24584	0.33301	1.03120	5.00922
49	0.62928	0.67484	0.59764	1.34797	0.24283	0.32893	1.01858	5.00922
50	0.62674	0.67240	0.59545	1.33520	0.24007	0.32519	1.00699	5.00922
51	0.62434	0.67011	0.59339	1.32369	0.23755	0.32177	0.99641	5.00922
52	0.62208	0.66794	0.59145	1.31340	0.23526	0.31867	0.98681	5.00922
53	0.61994	0.66590	0.58961	1.30427	0.23320	0.31588	0.97817	5.00922
54	0.61792	0.66396	0.58787	1.29626	0.23136	0.31339	0.97045	5.00922
55	0.61600	0.66213	0.58623	1.28934	0.22973	0.31119	0.96364	5.00922
56	0.63081	0.67557	0.59818	1.28348	0.22832	0.30928	0.95773	5.11652
57	0.64570	0.68911	0.61022	1.27864	0.22712	0.30765	0.95268	5.22383
58	0.66068	0.70273	0.62233	1.27481	0.22612	0.30630	0.94850	5.33113
59	0.67575	0.71643	0.63450	1.27197	0.22533	0.30522	0.94517	5.43844
60	0.69089	0.73020	0.64675	1.27012	0.22473	0.30442	0.94268	5.54574
61	0.70610	0.74404	0.65905	1.26924	0.22434	0.30388	0.94102	5.65305
62	0.72137	0.75794	0.67141	1.26934	0.22414	0.30361	0.94019	5.76035
63	0.73671	0.77190	0.68383	1.27043	0.22414	0.30361	0.94019	5.86766
64	0.75211	0.78591	0.69629	1.27252	0.22434	0.30388	0.94102	5.97496
65	0.76756	0.79998	0.70881	1.27561	0.22473	0.30442	0.94268	6.08226

Orange 2006 Time Period 3 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	53.58424	52.60437	47.38152	78.58070	4.34232	4.79962	35.02310	190.85941
4	41.99966	41.45811	37.37468	71.79581	4.00194	4.42339	32.27773	152.21460
5	35.04892	34.77036	31.37056	65.74118	3.69496	4.08408	29.80179	124.32216
6	30.41512	30.31184	27.36783	60.32979	3.41774	3.77767	27.56586	103.73981
7	27.10522	27.12721	24.50873	55.48573	3.16708	3.50061	25.54414	88.24190
8	24.62283	24.73872	22.36443	51.14301	2.94014	3.24978	23.71381	76.35423
9	22.69205	22.88103	20.69664	47.24403	2.73445	3.02242	22.05475	67.07899
10	21.14748	21.39485	19.36240	43.73839	2.54777	2.81608	20.54912	59.72618
11	19.88370	20.17889	18.27072	40.58209	2.37817	2.62861	19.18115	53.80981
12	18.83055	19.16559	17.36102	37.73645	2.22389	2.45810	17.93686	48.98128
13	17.93944	18.30821	16.59128	35.16768	2.08342	2.30283	16.80388	44.98651
14	17.17563	17.57329	15.93150	32.84587	1.95537	2.16129	15.77112	41.63750
15	16.51366	16.93637	15.35967	30.74501	1.83853	2.03216	14.82878	38.79330
16	15.93445	16.37906	14.85933	28.84180	1.73183	1.91421	13.96816	36.34697
17	15.42336	15.88733	14.41786	27.11607	1.63429	1.80640	13.18145	34.21660
18	14.96907	15.45022	14.02543	25.54973	1.54505	1.70777	12.46171	32.33899
19	14.56258	15.05912	13.67431	24.12688	1.46335	1.61746	11.80272	30.66492
20	13.95432	14.49512	13.16126	22.83345	1.38849	1.53472	11.19896	29.15616
21	13.17464	13.74189	12.47372	21.65695	1.31986	1.45886	10.64542	27.78271
22	12.46583	13.05713	11.84868	20.58632	1.25691	1.38928	10.13769	26.52139
23	11.81866	12.43191	11.27799	19.61171	1.19914	1.32543	9.67176	25.35396
24	11.22542	11.85880	10.75486	18.72440	1.14612	1.26682	9.24405	24.26646
25	10.67964	11.33153	10.27358	17.91660	1.09743	1.21300	8.85135	23.24835
26	10.17585	10.84482	9.82932	17.18141	1.05272	1.16359	8.49078	22.29132
27	9.70937	10.39417	9.41796	16.51268	1.01168	1.11822	8.15972	21.38937
28	9.27621	9.97570	9.03600	15.90492	0.97400	1.07658	7.85586	20.53793
29	8.87292	9.58609	8.68037	15.35328	0.93944	1.03837	7.57710	19.73386
30	8.49652	9.22246	8.34845	14.85340	0.90776	1.00335	7.32154	18.97484
31	8.14440	8.88229	8.03794	14.40144	0.87874	0.97128	7.08748	18.25902
32	7.81429	8.56338	7.74685	13.99399	0.85220	0.94194	6.87340	17.58510
33	7.50419	8.26379	7.47339	13.62803	0.82796	0.91515	6.67795	16.95253
34	7.21233	7.98183	7.21602	13.30086	0.80588	0.89075	6.49985	16.36005
35	6.93714	7.71598	6.97336	13.01013	0.78582	0.86857	6.33803	15.80738
36	6.67725	7.46491	6.74418	12.75378	0.76765	0.84849	6.19152	15.29325
37	6.43140	7.22740	6.52738	12.53003	0.75127	0.83039	6.05939	14.81745
38	6.19849	7.00239	6.32200	12.33732	0.73658	0.81415	5.94089	14.37850
39	5.97753	6.78892	6.12715	12.17431	0.72349	0.79968	5.83532	13.97542
40	5.76761	6.58613	5.94204	12.03992	0.71193	0.78690	5.74207	13.60696
41	5.56794	6.39322	5.76596	11.93324	0.70183	0.77574	5.66060	13.27160
42	5.37777	6.20951	5.59827	11.85355	0.69313	0.76612	5.59045	12.96726
43	5.19645	6.03434	5.43838	11.80034	0.68579	0.75801	5.53123	12.69205
44	5.02337	5.86713	5.28575	11.77322	0.67976	0.75134	5.48260	12.44320
45	4.85798	5.70735	5.13991	11.77206	0.67501	0.74609	5.44430	12.21815
46	4.69978	5.55452	5.00040	11.79679	0.67151	0.74223	5.41612	12.01363
47	4.54831	5.40819	4.86684	11.84763	0.66925	0.73974	5.39789	11.82563
48	4.40316	5.26796	4.73884	11.92489	0.66822	0.73859	5.38953	11.65019
49	4.40316	5.26796	4.73884	12.02910	0.66840	0.73879	5.39099	11.65019
50	4.40316	5.26796	4.73884	12.16093	0.66980	0.74033	5.40227	11.65019
51	4.40316	5.26796	4.73884	12.32128	0.67242	0.74323	5.42343	11.65019
52	4.40316	5.26796	4.73884	12.51126	0.67629	0.74751	5.45460	11.65019
53	4.40316	5.26796	4.73884	12.73211	0.68141	0.75317	5.49594	11.65019
54	4.40316	5.26796	4.73884	12.98544	0.68782	0.76026	5.54768	11.65019
55	4.40316	5.26796	4.73884	13.27295	0.69557	0.76882	5.61011	11.65019
56	4.82448	5.73234	5.14581	13.59671	0.70467	0.77888	5.68357	14.45588
57	5.24579	6.19671	5.55279	13.95904	0.71520	0.79052	5.76848	17.26158
58	5.66711	6.66109	5.95976	14.36260	0.72721	0.80379	5.86534	20.06728
59	6.08843	7.12547	6.36674	14.81038	0.74077	0.81878	5.97467	22.87297
60	6.50975	7.58984	6.77371	15.30574	0.75595	0.83556	6.09713	25.67867
61	6.93107	8.05422	7.18069	15.85251	0.77285	0.85424	6.23345	28.48434
62	7.35239	8.51859	7.58766	16.45496	0.79157	0.87493	6.38441	31.29002
63	7.77371	8.98297	7.99464	17.11792	0.81221	0.89775	6.55094	34.09575
64	8.19503	9.44735	8.40162	17.84685	0.83492	0.92285	6.73407	36.90144
65	8.61634	9.91172	8.80859	18.64771	0.85982	0.95037	6.93492	39.70712

Orange 2006 Time Period 3 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HGTV	LDDV	LDDT	HDDV	MC
3	1.73627	1.76098	1.74479	3.49700	1.85341	2.07334	13.01564	0.81913
4	1.58700	1.60959	1.59479	3.53319	1.77534	1.98602	12.46746	0.78349
5	1.49744	1.51875	1.50479	3.56938	1.70299	1.90508	11.95933	0.75391
6	1.43773	1.45819	1.44479	3.60556	1.63590	1.83003	11.48821	0.72993
7	1.39509	1.41494	1.40193	3.64175	1.57369	1.76044	11.05134	0.71110
8	1.36310	1.38250	1.36979	3.67794	1.51600	1.69590	10.64618	0.69700
9	1.33822	1.35727	1.34479	3.71413	1.46250	1.63605	10.27046	0.68719
10	1.31832	1.33708	1.32479	3.75031	1.41289	1.58055	9.92207	0.68129
11	1.30203	1.32056	1.30842	3.78650	1.36690	1.52911	9.59912	0.67891
12	1.28846	1.30680	1.29479	3.82269	1.32429	1.48144	9.29988	0.67968
13	1.27698	1.29516	1.28325	3.85888	1.28483	1.43729	9.02277	0.68326
14	1.26714	1.28518	1.27336	3.89506	1.24832	1.39645	8.76636	0.68930
15	1.25861	1.27652	1.26479	3.93125	1.21456	1.35869	8.52933	0.69750
16	1.25115	1.26895	1.25729	3.96744	1.18340	1.32384	8.31051	0.70754
17	1.24456	1.26227	1.25067	4.00362	1.15468	1.29171	8.10881	0.71914
18	1.23871	1.25634	1.24479	4.03981	1.12826	1.26215	7.92325	0.73204
19	1.23347	1.25103	1.23952	4.07600	1.10400	1.23501	7.75293	0.74598
20	1.23624	1.24331	1.23171	4.11219	1.08181	1.21019	7.59706	0.76073
21	1.24420	1.24527	1.23345	4.14837	1.06157	1.18754	7.45490	0.77606
22	1.25144	1.24706	1.23502	4.18456	1.04318	1.16697	7.32579	0.79177
23	1.25804	1.24869	1.23646	4.22074	1.02657	1.14839	7.20916	0.80768
24	1.26410	1.25019	1.23778	4.25693	1.01166	1.13171	7.10445	0.82360
25	1.26967	1.25156	1.23900	4.29312	0.99839	1.11686	7.01122	0.83940
26	1.27481	1.25283	1.24012	4.32931	0.98669	1.10377	6.92904	0.85492
27	1.27958	1.25401	1.24115	4.36549	0.97651	1.09238	6.85756	0.87005
28	1.28400	1.25510	1.24212	4.40168	0.96781	1.08265	6.79646	0.88468
29	1.28812	1.25612	1.24302	4.43787	0.96055	1.07453	6.74548	0.89872
30	1.29196	1.25707	1.24385	4.47406	0.95469	1.06798	6.70438	0.91210
31	1.29555	1.25796	1.24464	4.51025	0.95023	1.06299	6.67301	0.92477
32	1.29892	1.25879	1.24537	4.54643	0.94712	1.05952	6.65123	0.93667
33	1.30209	1.25957	1.24606	4.58262	0.94537	1.05756	6.63894	0.94779
34	1.30507	1.26031	1.24671	4.61880	0.94497	1.05710	6.63608	0.95811
35	1.30788	1.26100	1.24732	4.65499	0.94590	1.05815	6.64265	0.96766
36	1.31053	1.26166	1.24790	4.69118	0.94819	1.06070	6.65868	0.97644
37	1.31304	1.26228	1.24845	4.72737	0.95182	1.06477	6.68423	0.98451
38	1.31542	1.26286	1.24896	4.76355	0.95684	1.07038	6.71942	0.99191
39	1.31767	1.26342	1.24946	4.79974	0.96324	1.07754	6.76438	0.99874
40	1.31981	1.26395	1.24992	4.83593	0.97106	1.08630	6.81933	1.00506
41	1.32185	1.26445	1.25037	4.87211	0.98034	1.09668	6.88449	1.01099
42	1.32380	1.26493	1.25079	4.90830	0.99112	1.10873	6.96015	1.01666
43	1.32565	1.26539	1.25119	4.94449	1.00343	1.12251	7.04665	1.02219
44	1.32741	1.26583	1.25158	4.98068	1.01734	1.13807	7.14435	1.02776
45	1.32910	1.26624	1.25195	5.01686	1.03291	1.15549	7.25369	1.03352
46	1.33072	1.26664	1.25230	5.05305	1.05022	1.17484	7.37519	1.03967
47	1.33226	1.26703	1.25264	5.08924	1.06932	1.19622	7.50937	1.04641
48	1.33374	1.26739	1.25296	5.12543	1.09032	1.21971	7.65685	1.05396
49	1.37290	1.31482	1.29970	5.16161	1.11332	1.24543	7.81834	1.08828
50	1.41205	1.36224	1.34644	5.19780	1.13841	1.27351	7.99456	1.12260
51	1.45120	1.40967	1.39318	5.23399	1.16573	1.30406	8.18637	1.15692
52	1.49035	1.45710	1.43993	5.27017	1.19539	1.33725	8.39471	1.19124
53	1.52951	1.50452	1.48666	5.30636	1.22756	1.37323	8.62057	1.22556
54	1.56866	1.55195	1.53341	5.34255	1.26237	1.41218	8.86509	1.25988
55	1.60781	1.59937	1.58015	5.37874	1.30003	1.45430	9.12951	1.29420
56	1.64697	1.64680	1.62689	5.41492	1.34070	1.49980	9.41516	1.32852
57	1.68612	1.69422	1.67363	5.45111	1.38462	1.54893	9.72356	1.36283
58	1.72528	1.74165	1.72037	5.48730	1.43200	1.60194	10.05632	1.39715
59	1.76443	1.78908	1.76712	5.52349	1.48311	1.65911	10.41525	1.43147
60	1.80358	1.83650	1.81386	5.55967	1.53823	1.72077	10.80233	1.46579
61	1.84273	1.88393	1.86060	5.59586	1.59767	1.78726	11.21970	1.50011
62	1.88189	1.93136	1.90734	5.63205	1.66176	1.85895	11.66976	1.53443
63	1.92104	1.97878	1.95408	5.66824	1.73087	1.93627	12.15513	1.56875
64	1.96019	2.02621	2.00082	5.70442	1.80542	2.01967	12.67868	1.60307
65	1.99935	2.07363	2.04756	5.74061	1.88586	2.10965	13.24356	1.63739

Orange 2006 Time Period 4 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	5.64680	5.91725	5.35491	9.34190	1.06409	1.44138	4.46347	14.04974
4	4.14068	4.33999	3.92720	7.68269	1.01025	1.36845	4.23764	11.84813
5	3.31360	3.46755	3.13721	6.66390	0.95998	1.30036	4.02678	10.21751
6	2.79414	2.91673	2.63832	5.92887	0.91302	1.23674	3.82978	8.98672
7	2.43872	2.53837	2.29558	5.35044	0.86912	1.17727	3.64562	8.04167
8	2.21154	2.29252	2.07276	4.92337	0.82805	1.12165	3.47337	7.30459
9	2.03678	2.10249	1.90052	4.55071	0.78962	1.06960	3.31218	6.72146
10	1.89561	1.94851	1.76095	4.21774	0.75364	1.02086	3.16125	6.25397
11	1.77886	1.82076	1.64515	3.91882	0.71993	0.97520	3.01985	5.87453
12	1.68044	1.71268	1.54718	3.64948	0.68834	0.93240	2.88731	5.56289
13	1.59612	1.61972	1.46292	3.40602	0.65871	0.89226	2.76302	5.30401
14	1.52287	1.53865	1.38943	3.18538	0.63091	0.85460	2.64641	5.08649
15	1.45848	1.46710	1.32456	2.98493	0.60481	0.81926	2.53696	4.90166
16	1.40128	1.40326	1.26669	2.80243	0.58031	0.78606	2.43417	4.74280
17	1.35002	1.34580	1.21459	2.63594	0.55729	0.75488	2.33760	4.60465
18	1.30369	1.29363	1.16729	2.48376	0.53565	0.72557	2.24684	4.48310
19	1.26153	1.24593	1.12404	2.34440	0.51530	0.69801	2.16151	4.37488
20	1.21037	1.19467	1.07730	2.21916	0.49617	0.67209	2.08124	4.27740
21	1.15946	1.14810	1.03487	2.10820	0.47817	0.64771	2.00573	4.18863
22	1.11307	1.10569	0.99625	2.00659	0.46122	0.62475	1.93465	4.10694
23	1.07060	1.06692	0.96092	1.91342	0.44527	0.60315	1.86773	4.03107
24	1.03157	1.03132	0.92849	1.82790	0.43025	0.58280	1.80472	3.96001
25	0.99556	0.99851	0.89860	1.74931	0.41610	0.56363	1.74537	3.89304
26	0.96222	0.96817	0.87096	1.67701	0.40277	0.54557	1.68946	3.82958
27	0.93126	0.94003	0.84532	1.61042	0.39021	0.52856	1.63677	3.76922
28	0.90241	0.91385	0.82147	1.54905	0.37837	0.51253	1.58713	3.71168
29	0.87548	0.88942	0.79922	1.49242	0.36722	0.49742	1.54035	3.65679
30	0.85025	0.86658	0.77841	1.44013	0.35671	0.48318	1.49626	3.60443
31	0.82657	0.84517	0.75891	1.39181	0.34680	0.46977	1.45471	3.55458
32	0.80429	0.82505	0.74058	1.34713	0.33747	0.45713	1.41556	3.50721
33	0.78329	0.80611	0.72333	1.30578	0.32868	0.44522	1.37868	3.46239
34	0.76344	0.78825	0.70705	1.26750	0.32040	0.43400	1.34394	3.42012
35	0.74466	0.77136	0.69167	1.23205	0.31260	0.42343	1.31123	3.38050
36	0.72685	0.75538	0.67711	1.19920	0.30526	0.41349	1.28044	3.34356
37	0.70994	0.74022	0.66330	1.16876	0.29835	0.40414	1.25148	3.30935
38	0.69385	0.72582	0.65018	1.14055	0.29186	0.39535	1.22425	3.27791
39	0.67852	0.71213	0.63771	1.11440	0.28576	0.38708	1.19866	3.24925
40	0.66390	0.69908	0.62583	1.09018	0.28004	0.37933	1.17465	3.22335
41	0.64992	0.68664	0.61450	1.06774	0.27467	0.37205	1.15212	3.20022
42	0.63656	0.67476	0.60367	1.04698	0.26964	0.36524	1.13103	3.17974
43	0.62375	0.66340	0.59332	1.02778	0.26493	0.35887	1.11129	3.16178
44	0.61147	0.65252	0.58342	1.01004	0.26054	0.35292	1.09287	3.14626
45	0.59968	0.64210	0.57392	0.99368	0.25645	0.34737	1.07570	3.13295
46	0.58835	0.63210	0.56481	0.97862	0.25264	0.34222	1.05972	3.12159
47	0.57745	0.62250	0.55606	0.96480	0.24911	0.33743	1.04491	3.11185
48	0.56699	0.61325	0.54765	0.95214	0.24584	0.33301	1.03120	3.10333
49	0.56552	0.61184	0.54637	0.94070	0.24283	0.32893	1.01858	3.10333
50	0.56413	0.61050	0.54517	0.93043	0.24007	0.32519	1.00699	3.10333
51	0.56283	0.60925	0.54403	0.92127	0.23755	0.32177	0.99641	3.10333
52	0.56159	0.60806	0.54296	0.91318	0.23526	0.31867	0.98681	3.10333
53	0.56042	0.60693	0.54195	0.90611	0.23320	0.31588	0.97817	3.10333
54	0.55932	0.60587	0.54099	0.90003	0.23136	0.31339	0.97045	3.10333
55	0.55827	0.60486	0.54008	0.89491	0.22973	0.31119	0.96364	3.10333
56	0.55739	0.61909	0.55273	0.89074	0.22832	0.30928	0.95773	3.21183
57	0.58957	0.63336	0.56542	0.88748	0.22712	0.30765	0.95268	3.32034
58	0.60529	0.64768	0.57816	0.88513	0.22612	0.30630	0.94850	3.42884
59	0.62105	0.66205	0.59093	0.88368	0.22533	0.30522	0.94517	3.53735
60	0.63686	0.67645	0.60374	0.88312	0.22473	0.30442	0.94268	3.64586
61	0.65270	0.69089	0.61658	0.88345	0.22434	0.30388	0.94102	3.75436
62	0.66858	0.70536	0.62945	0.88467	0.22414	0.30361	0.94019	3.86287
63	0.68449	0.71986	0.64235	0.88680	0.22414	0.30361	0.94019	3.97137
64	0.70044	0.73440	0.65528	0.88985	0.22434	0.30388	0.94102	4.07987
65	0.71641	0.74896	0.66824	0.89383	0.22473	0.30442	0.94268	4.18838

Orange 2006 Time Period 4 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	53.58311	52.60132	47.37968	73.16467	4.34232	4.79962	35.02310	153.95207
4	41.99881	41.45581	37.37331	66.84740	4.00194	4.42339	32.27773	122.78018
5	35.04825	34.76852	31.36946	61.21013	3.69496	4.08408	29.80179	100.28142
6	30.41454	30.31032	27.36691	56.17174	3.41774	3.77767	27.56586	83.67912
7	27.10472	27.12592	24.50795	51.66153	3.16708	3.50061	25.54414	71.17812
8	24.62241	24.73758	22.36374	47.61810	2.94014	3.24978	23.71381	61.58925
9	22.69167	22.88002	20.69603	43.98781	2.73445	3.02242	22.05475	54.10765
10	21.14713	21.39395	19.36185	40.72382	2.54777	2.81608	20.54912	48.17664
11	19.88338	20.17809	18.27023	37.78506	2.37817	2.62861	19.18115	43.40433
12	18.83026	19.16484	17.36057	35.13554	2.22389	2.45810	17.93686	39.50955
13	17.93918	18.30753	16.59087	32.74380	2.08342	2.30283	16.80388	36.28728
14	17.17537	17.57265	15.93112	30.58203	1.95537	2.16129	15.77112	33.58586
15	16.51343	16.93578	15.35931	28.62598	1.83853	2.03216	14.82878	31.29167
16	15.93423	16.37849	14.85899	26.85396	1.73183	1.91421	13.96816	29.31841
17	15.42315	15.88681	14.41754	25.24718	1.63429	1.80640	13.18145	27.59996
18	14.96887	15.44973	14.02513	23.78877	1.54505	1.70777	12.46171	26.08546
19	14.56240	15.05866	13.67403	22.46399	1.46335	1.61746	11.80272	24.73511
20	13.95414	14.49467	13.16099	21.25974	1.38849	1.53472	11.19896	23.51808
21	13.17446	13.74145	12.47346	20.16429	1.31986	1.45886	10.64542	22.41025
22	12.46566	13.05670	11.84842	19.16747	1.25691	1.38928	10.13769	21.39282
23	11.81849	12.43149	11.27774	18.26001	1.19914	1.32543	9.67176	20.45114
24	11.22526	11.85838	10.75461	17.43387	1.14612	1.26682	9.24405	19.57396
25	10.67949	11.33112	10.27333	16.68175	1.09743	1.21300	8.85135	18.75270
26	10.17569	10.84442	9.82908	15.99724	1.05272	1.16359	8.49078	17.98074
27	9.70922	10.39377	9.41773	15.37460	1.01168	1.11822	8.15972	17.25323
28	9.27606	9.97531	9.03576	14.80871	0.97400	1.07658	7.85586	16.56644
29	8.87278	9.58571	8.68014	14.29509	0.93944	1.03837	7.57710	15.91785
30	8.49638	9.22208	8.34822	13.82967	0.90776	1.00335	7.32154	15.30561
31	8.14426	8.88192	8.03772	13.40885	0.87874	0.97128	7.08748	14.72820
32	7.81416	8.56301	7.74663	13.02949	0.85220	0.94194	6.87340	14.18461
33	7.50406	8.26343	7.47317	12.68874	0.82796	0.91515	6.67795	13.67436
34	7.21220	7.98147	7.21581	12.38413	0.80588	0.89075	6.49985	13.19644
35	6.93701	7.71563	6.97315	12.11344	0.78582	0.86857	6.33803	12.75064
36	6.67712	7.46455	6.74397	11.87476	0.76765	0.84849	6.19152	12.33592
37	6.43127	7.22705	6.52717	11.66642	0.75127	0.83039	6.05939	11.95213
38	6.19837	7.00204	6.32179	11.48699	0.73658	0.81415	5.94089	11.59806
39	5.97741	6.78858	6.12694	11.33522	0.72349	0.79968	5.83532	11.27293
40	5.76749	6.58578	5.94184	11.21010	0.71193	0.78690	5.74207	10.97572
41	5.56782	6.39288	5.76576	11.11077	0.70183	0.77574	5.66060	10.70521
42	5.37765	6.20917	5.59807	11.03657	0.69313	0.76612	5.59045	10.45972
43	5.19633	6.03400	5.43817	10.98703	0.68579	0.75801	5.53123	10.23773
44	5.02325	5.86679	5.28555	10.96178	0.67976	0.75134	5.48260	10.03700
45	4.85786	5.70702	5.13971	10.96069	0.67501	0.74609	5.44430	9.85547
46	4.69967	5.55419	5.00021	10.98373	0.67151	0.74223	5.41612	9.69050
47	4.54820	5.40786	4.86664	11.03106	0.66925	0.73974	5.39789	9.53885
48	4.40305	5.26763	4.73864	11.10300	0.66822	0.73859	5.38953	9.39734
49	4.40305	5.26763	4.73864	11.20002	0.66840	0.73879	5.39099	9.39734
50	4.40305	5.26763	4.73864	11.32276	0.66980	0.74033	5.40227	9.39734
51	4.40305	5.26763	4.73864	11.47206	0.67242	0.74323	5.42343	9.39734
52	4.40305	5.26763	4.73864	11.64894	0.67629	0.74751	5.45460	9.39734
53	4.40305	5.26763	4.73864	11.85458	0.68141	0.75317	5.49594	9.39734
54	4.40305	5.26763	4.73864	12.09045	0.68782	0.76026	5.54768	9.39734
55	4.40305	5.26763	4.73864	12.35814	0.69557	0.76882	5.61011	9.39734
56	4.82434	5.73194	5.14557	12.65959	0.70467	0.77888	5.68357	11.66049
57	5.24564	6.19624	5.55251	12.99695	0.71520	0.79052	5.76848	13.92364
58	5.66694	6.66055	5.95944	13.32769	0.72721	0.80379	5.86534	16.18678
59	6.08823	7.12486	6.36638	13.78960	0.74077	0.81878	5.97467	18.44992
60	6.50952	7.58916	6.77331	14.25083	0.75595	0.83556	6.09713	20.71304
61	6.93082	8.05347	7.18024	14.75991	0.77285	0.85424	6.23345	22.97621
62	7.35212	8.51777	7.58717	15.32085	0.79157	0.87493	6.38441	25.23935
63	7.77342	8.98208	7.99411	15.93814	0.81221	0.89775	6.55094	27.50250
64	8.19471	9.44638	8.40104	16.61681	0.83492	0.92285	6.73407	29.76561
65	8.61601	9.91069	8.80797	17.36247	0.85982	0.95037	6.93492	32.02878

Orange 2006 Time Period 4 NOX Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	1.70803	1.73279	1.71755	3.45663	1.85341	2.07334	13.01564	0.90987
4	1.56119	1.58383	1.56989	3.49240	1.77534	1.98602	12.46746	0.87028
5	1.47309	1.49444	1.48130	3.52817	1.70299	1.90508	11.95933	0.83742
6	1.41435	1.43485	1.42223	3.56394	1.63590	1.83003	11.48821	0.81079
7	1.37239	1.39229	1.38005	3.59970	1.57369	1.76044	11.05134	0.78987
8	1.34093	1.36037	1.34840	3.63547	1.51600	1.69590	10.64618	0.77420
9	1.31645	1.33554	1.32379	3.67125	1.46250	1.63605	10.27046	0.76331
10	1.29688	1.31568	1.30411	3.70701	1.41289	1.58055	9.92207	0.75676
11	1.28086	1.29943	1.28800	3.74278	1.36690	1.52911	9.59912	0.75411
12	1.26751	1.28588	1.27457	3.77855	1.32429	1.48144	9.29988	0.75497
13	1.25621	1.27443	1.26322	3.81432	1.28483	1.43729	9.02277	0.75894
14	1.24653	1.26461	1.25348	3.85009	1.24832	1.39645	8.76636	0.76566
15	1.23814	1.25609	1.24504	3.88586	1.21456	1.35869	8.52933	0.77476
16	1.23080	1.24864	1.23766	3.92163	1.18340	1.32384	8.31051	0.78591
17	1.22432	1.24207	1.23114	3.95740	1.15468	1.29171	8.10881	0.79880
18	1.21856	1.23623	1.22536	3.99317	1.12826	1.26215	7.92325	0.81313
19	1.21341	1.23100	1.22017	4.02894	1.10400	1.23501	7.75293	0.82862
20	1.21613	1.22341	1.21249	4.06471	1.08181	1.21019	7.59706	0.84500
21	1.22396	1.22535	1.21420	4.10048	1.06157	1.18754	7.45490	0.86203
22	1.23108	1.22711	1.21575	4.13624	1.04318	1.16697	7.32579	0.87948
23	1.23758	1.22872	1.21717	4.17201	1.02657	1.14839	7.20916	0.89714
24	1.24354	1.23019	1.21847	4.20778	1.01166	1.13171	7.10445	0.91483
25	1.24902	1.23155	1.21966	4.24355	0.99839	1.11686	7.01122	0.93238
26	1.25408	1.23280	1.22077	4.27932	0.98669	1.10377	6.92904	0.94962
27	1.25876	1.23396	1.22179	4.31509	0.97651	1.09238	6.85756	0.96643
28	1.26311	1.23504	1.22274	4.35086	0.96781	1.08265	6.79646	0.98268
29	1.26717	1.23604	1.22363	4.38663	0.96055	1.07453	6.74548	0.99828
30	1.27094	1.23697	1.22445	4.42240	0.95469	1.06798	6.70438	1.01314
31	1.27448	1.23785	1.22522	4.45817	0.95023	1.06299	6.67301	1.02720
32	1.27780	1.23867	1.22595	4.49394	0.94712	1.05952	6.65123	1.04042
33	1.28091	1.23944	1.22663	4.52971	0.94537	1.05756	6.63894	1.05277
34	1.28384	1.24017	1.22727	4.56548	0.94497	1.05710	6.63608	1.06424
35	1.28660	1.24085	1.22787	4.60125	0.94590	1.05815	6.64265	1.07484
36	1.28921	1.24150	1.22844	4.63702	0.94819	1.06070	6.65868	1.08460
37	1.29168	1.24211	1.22898	4.67279	0.95182	1.06477	6.68423	1.09356
38	1.29402	1.24269	1.22949	4.70856	0.95684	1.07038	6.71942	1.10179
39	1.29624	1.24323	1.22997	4.74432	0.96324	1.07754	6.76438	1.10937
40	1.29835	1.24376	1.23043	4.78010	0.97106	1.08630	6.81933	1.11639
41	1.30035	1.24425	1.23087	4.81586	0.98034	1.09668	6.88449	1.12298
42	1.30226	1.24473	1.23129	4.85163	0.99112	1.10873	6.96015	1.12927
43	1.30409	1.24518	1.23168	4.88740	1.00343	1.12251	7.04665	1.13542
44	1.30582	1.24561	1.23206	4.92317	1.01734	1.13807	7.14435	1.14161
45	1.30748	1.24602	1.23243	4.95894	1.03291	1.15549	7.25369	1.14801
46	1.30907	1.24641	1.23277	4.99471	1.05022	1.17484	7.37519	1.15484
47	1.31060	1.24679	1.23311	5.03048	1.06932	1.19622	7.50937	1.16232
48	1.31205	1.24715	1.23342	5.06625	1.09032	1.21971	7.65685	1.17071
49	1.35057	1.29382	1.27944	5.10202	1.11332	1.24543	7.81834	1.20883
50	1.38908	1.34049	1.32545	5.13779	1.13841	1.27351	7.99456	1.24695
51	1.42760	1.38716	1.37146	5.17356	1.16573	1.30406	8.18637	1.28507
52	1.46612	1.43383	1.41748	5.20933	1.19539	1.33725	8.39471	1.32319
53	1.50464	1.48050	1.46349	5.24510	1.22756	1.37323	8.62057	1.36131
54	1.54315	1.52717	1.50950	5.28086	1.26237	1.41218	8.86509	1.39943
55	1.58167	1.57384	1.55552	5.31664	1.30003	1.45430	9.12951	1.43756
56	1.62019	1.62051	1.60153	5.35240	1.34070	1.49980	9.41516	1.47568
57	1.65870	1.66718	1.64754	5.38818	1.38462	1.54893	9.72356	1.51380
58	1.69722	1.71385	1.69356	5.42394	1.43200	1.60194	10.05632	1.55192
59	1.73574	1.76052	1.73957	5.45971	1.48311	1.65911	10.41525	1.59004
60	1.77425	1.80719	1.78558	5.49548	1.53823	1.72077	10.80233	1.62816
61	1.81277	1.85386	1.83160	5.53126	1.59767	1.78726	11.21970	1.66628
62	1.85129	1.90053	1.87761	5.56702	1.66176	1.85895	11.66976	1.70440
63	1.88981	1.94720	1.92363	5.60279	1.73087	1.93627	12.15513	1.74252
64	1.92832	1.99387	1.96964	5.63856	1.80542	2.01967	12.67868	1.78064
65	1.96684	2.04054	2.01565	5.67433	1.88586	2.10965	13.24356	1.81876

Orange 2016 Time Period 1 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	5.28470	5.58231	5.83257	8.15184	1.09115	1.46630	4.43164	13.31473
4	3.87828	4.09646	4.28467	6.76269	1.03594	1.39211	4.20742	11.21410
5	3.10655	3.27493	3.42735	5.89346	0.98440	1.32284	3.99806	9.65828
6	2.62212	2.75640	2.88557	5.25659	0.93624	1.25812	3.80246	8.48395
7	2.29081	2.40031	2.51316	4.74960	0.89122	1.19763	3.61962	7.58225
8	2.07671	2.16698	2.26813	4.36608	0.84911	1.14104	3.44860	6.87898
9	1.91222	1.98699	2.07908	4.03031	0.80971	1.08809	3.28856	6.32259
10	1.77980	1.84170	1.92656	3.73024	0.77281	1.03850	3.13870	5.87655
11	1.67071	1.72164	1.80061	3.46090	0.73824	0.99205	2.99831	5.51451
12	1.57910	1.62051	1.69458	3.21832	0.70584	0.94852	2.86672	5.21717
13	1.50096	1.53393	1.60388	2.99923	0.67546	0.90768	2.74332	4.97016
14	1.43339	1.45880	1.52522	2.80086	0.64695	0.86938	2.62754	4.76263
15	1.37428	1.39281	1.45619	2.62085	0.62019	0.83342	2.51887	4.58627
16	1.32204	1.33426	1.39499	2.45719	0.59506	0.79965	2.41681	4.43470
17	1.27546	1.28184	1.34023	2.30811	0.57146	0.76793	2.32093	4.30289
18	1.23360	1.23452	1.29085	2.17208	0.54927	0.73811	2.23082	4.18691
19	1.19571	1.19149	1.24599	2.04775	0.52841	0.71008	2.14609	4.08365
20	1.14744	1.14266	1.19481	1.93534	0.50879	0.68371	2.06640	3.99065
21	1.09797	1.09724	1.14696	1.83448	0.49033	0.65890	1.99142	3.90595
22	1.05293	1.05591	1.10343	1.74217	0.47295	0.63555	1.92085	3.82801
23	1.01174	1.01814	1.06364	1.65757	0.45659	0.61357	1.85442	3.75561
24	0.97391	0.98347	1.02713	1.57997	0.44119	0.59287	1.79185	3.68782
25	0.93905	0.95154	0.99350	1.50869	0.42668	0.57337	1.73292	3.62392
26	0.90682	0.92203	0.96242	1.44317	0.41301	0.55501	1.67741	3.56336
27	0.87691	0.89468	0.93362	1.38288	0.40013	0.53770	1.62510	3.50578
28	0.84909	0.86924	0.90683	1.32735	0.38799	0.52139	1.57581	3.45088
29	0.82313	0.84553	0.88187	1.27616	0.37656	0.50602	1.52936	3.39851
30	0.79886	0.82336	0.85853	1.22894	0.36578	0.49154	1.48559	3.34855
31	0.77610	0.80260	0.83668	1.18536	0.35562	0.47789	1.44434	3.30098
32	0.75471	0.78310	0.81616	1.14510	0.34605	0.46503	1.40547	3.25579
33	0.73457	0.76476	0.79686	1.10789	0.33704	0.45291	1.36885	3.21302
34	0.71558	0.74747	0.77866	1.07349	0.32854	0.44150	1.33436	3.17269
35	0.69762	0.73115	0.76148	1.04168	0.32055	0.43075	1.30188	3.13489
36	0.68062	0.71570	0.74523	1.01225	0.31302	0.42064	1.27131	3.09965
37	0.66450	0.70106	0.72983	0.98502	0.30594	0.41113	1.24255	3.06700
38	0.64919	0.68717	0.71522	0.95983	0.29928	0.40218	1.21552	3.03700
39	0.63462	0.67397	0.70134	0.93654	0.29303	0.39377	1.19012	3.00966
40	0.62075	0.66141	0.68813	0.91500	0.28716	0.38588	1.16627	2.98495
41	0.60751	0.64944	0.67553	0.89510	0.28165	0.37849	1.14391	2.96287
42	0.59486	0.63801	0.66352	0.87673	0.27649	0.37156	1.12296	2.94334
43	0.58277	0.62709	0.65205	0.85979	0.27167	0.36507	1.10337	2.92621
44	0.57120	0.61665	0.64107	0.84419	0.26717	0.35902	1.08508	2.91140
45	0.56010	0.60666	0.63056	0.82985	0.26297	0.35338	1.06802	2.89869
46	0.54946	0.59707	0.62050	0.81670	0.25906	0.34813	1.05217	2.88785
47	0.53923	0.58788	0.61083	0.80468	0.25544	0.34326	1.03746	2.87856
48	0.52940	0.57902	0.60153	0.79369	0.25209	0.33876	1.02385	2.87043
49	0.52805	0.57771	0.60019	0.78347	0.24900	0.33461	1.01131	2.87043
50	0.52679	0.57648	0.59894	0.77430	0.24617	0.33081	0.99981	2.87043
51	0.52559	0.57531	0.59775	0.76614	0.24359	0.32733	0.98931	2.87043
52	0.52446	0.57422	0.59663	0.75895	0.24124	0.32418	0.97978	2.87043
53	0.52339	0.57318	0.59557	0.75268	0.23913	0.32134	0.97119	2.87043
54	0.52238	0.57219	0.59457	0.74732	0.23724	0.31880	0.96353	2.87043
55	0.52143	0.57126	0.59362	0.74283	0.23558	0.31657	0.95677	2.87043
56	0.53620	0.58412	0.60724	0.73919	0.23413	0.31462	0.95090	2.97396
57	0.55101	0.59701	0.62091	0.73639	0.23290	0.31297	0.94589	3.07749
58	0.56587	0.60995	0.63462	0.73442	0.23187	0.31159	0.94174	3.18102
59	0.58077	0.62293	0.64836	0.73326	0.23106	0.31050	0.93843	3.28454
60	0.59571	0.63595	0.66215	0.73292	0.23045	0.30968	0.93595	3.38807
61	0.61068	0.64900	0.67597	0.73338	0.23004	0.30913	0.93431	3.49160
62	0.62569	0.66208	0.68982	0.73467	0.22984	0.30886	0.93349	3.59513
63	0.64073	0.67519	0.70370	0.73678	0.22984	0.30886	0.93349	3.69866
64	0.65579	0.68833	0.71762	0.73973	0.23004	0.30913	0.93431	3.80218
65	0.67089	0.70150	0.73156	0.74353	0.23045	0.30968	0.93595	3.90571

Orange 2016 Time Period 1 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDBGV	LDDV	LDDT	HDDV	MC
3	52.33731	50.60733	52.69589	60.23039	4.39209	4.83405	35.73105	150.28793
4	41.08897	39.99843	41.64920	55.02997	4.04781	4.45512	32.93021	119.85786
5	34.33998	33.63316	35.02119	50.38921	3.73731	4.11338	30.40421	97.89468
6	29.84067	29.38960	30.60254	46.24153	3.45691	3.80477	28.12306	81.68755
7	26.62685	26.35854	27.44635	42.52864	3.20338	3.52572	26.06049	69.48405
8	24.21646	24.08519	25.07921	39.20003	2.97385	3.27309	24.19316	60.12341
9	22.34177	22.31706	23.23808	36.21155	2.76579	3.04410	22.50056	52.81985
10	20.84200	20.90254	21.76520	33.52452	2.57698	2.83629	20.96448	47.02998
11	19.61493	19.74521	20.56010	31.10532	2.40543	2.64747	19.56886	42.37131
12	18.59233	18.78078	19.55588	28.92421	2.24938	2.47573	18.29942	38.56921
13	17.72708	17.96472	18.70613	26.95528	2.10730	2.31935	17.14355	35.42361
14	16.98543	17.26524	17.97778	25.17564	1.97778	2.17680	16.08990	32.78653
15	16.34268	16.65903	17.34654	23.56537	1.85961	2.04673	15.12853	30.54689
16	15.78028	16.12859	16.79422	22.10663	1.75168	1.92795	14.25052	28.62062
17	15.28402	15.66057	16.30688	20.78391	1.65302	1.81936	13.44790	26.94307
18	14.84292	15.24453	15.87368	19.58333	1.56276	1.72002	12.71362	25.46461
19	14.44823	14.87229	15.48608	18.49274	1.48012	1.62906	12.04130	24.14639
20	13.83934	14.30784	14.89833	17.50137	1.40441	1.54573	11.42534	22.95834
21	13.05157	13.54969	14.10889	16.59961	1.33499	1.46933	10.86061	21.87686
22	12.33542	12.86046	13.39122	15.77900	1.27132	1.39925	10.34261	20.88368
23	11.68154	12.23116	12.73595	15.03198	1.21289	1.33494	9.86727	19.96440
24	11.08215	11.65431	12.13528	14.35187	1.15925	1.27590	9.43091	19.10808
25	10.53071	11.12360	11.58267	13.73271	1.11001	1.22170	9.03027	18.30640
26	10.02169	10.63371	11.07257	13.16920	1.06479	1.17193	8.66241	17.55280
27	9.55037	10.18012	10.60026	12.65663	1.02327	1.12624	8.32466	16.84259
28	9.11273	9.75892	10.16168	12.19078	0.98517	1.08430	8.01466	16.17215
29	8.70526	9.36677	9.75334	11.76796	0.95021	1.04582	7.73026	15.53900
30	8.32495	9.00076	9.37223	11.38482	0.91816	1.01055	7.46953	14.94133
31	7.96919	8.65837	9.01571	11.03839	0.88881	0.97825	7.23075	14.37767
32	7.63565	8.33738	8.68147	10.72609	0.86196	0.94870	7.01234	13.84700
33	7.32234	8.03584	8.36748	10.44559	0.83745	0.92172	6.81294	13.34890
34	7.02745	7.75204	8.07197	10.19482	0.81512	0.89714	6.63124	12.88235
35	6.74941	7.48446	7.79334	9.97198	0.79483	0.87481	6.46615	12.44716
36	6.48682	7.23174	7.53020	9.77550	0.77645	0.85458	6.31667	12.04232
37	6.23843	6.99268	7.28127	9.60400	0.75988	0.83635	6.18187	11.66766
38	6.00310	6.76621	7.04545	9.45629	0.74502	0.81999	6.06098	11.32202
39	5.77985	6.55134	6.82172	9.33134	0.73178	0.80542	5.95328	11.00463
40	5.56776	6.34723	6.60918	9.22834	0.72009	0.79255	5.85814	10.71449
41	5.36601	6.15306	6.40700	9.14657	0.70987	0.78130	5.77502	10.45042
42	5.17387	5.96815	6.21445	9.08549	0.70107	0.77162	5.70345	10.21077
43	4.99067	5.79183	6.03086	9.04471	0.69365	0.76345	5.64303	9.99406
44	4.81579	5.62353	5.85562	9.02392	0.68755	0.75673	5.59342	9.79811
45	4.64869	5.46271	5.68816	9.02303	0.68275	0.75145	5.55435	9.62090
46	4.48885	5.30888	5.52798	9.04199	0.67921	0.74756	5.52560	9.45986
47	4.33582	5.16160	5.37462	9.08095	0.67693	0.74504	5.50700	9.31182
48	4.18916	5.02046	5.22765	9.14017	0.67588	0.74389	5.49848	9.17367
49	4.18916	5.02046	5.22765	9.22005	0.67606	0.74409	5.49997	9.17367
50	4.18916	5.02046	5.22765	9.32109	0.67747	0.74565	5.51147	9.17367
51	4.18916	5.02046	5.22765	9.44399	0.68013	0.74857	5.53306	9.17367
52	4.18916	5.02046	5.22765	9.58961	0.68404	0.75287	5.56486	9.17367
53	4.18916	5.02046	5.22765	9.75889	0.68922	0.75857	5.60703	9.17367
54	4.18916	5.02046	5.22765	9.95306	0.69571	0.76572	5.65982	9.17367
55	4.18916	5.02046	5.22765	10.17343	0.70354	0.77433	5.72351	9.17367
56	4.57272	5.42596	5.64989	10.42159	0.71275	0.78447	5.79846	11.38296
57	4.95630	5.83147	6.07213	10.69931	0.72340	0.79619	5.88509	13.59225
58	5.33987	6.23697	6.49437	11.00862	0.73555	0.80956	5.98390	15.80153
59	5.72344	6.64248	6.91662	11.35183	0.74926	0.82465	6.09544	18.01079
60	6.10701	7.04798	7.33886	11.73152	0.76462	0.84156	6.22038	20.22009
61	6.49058	7.45349	7.76110	12.15061	0.78171	0.86037	6.35945	22.42938
62	6.87415	7.85900	8.18334	12.61238	0.80064	0.88121	6.51346	24.63863
63	7.25772	8.26451	8.60558	13.12055	0.82152	0.90419	6.68336	26.84793
64	7.64129	8.67001	9.02783	13.67924	0.84449	0.92947	6.87019	29.05722
65	8.02486	9.07551	9.45006	14.29310	0.86968	0.95719	7.07510	31.26648

Orange 2016 Time Period 1 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	1.65771	1.67836	1.88352	3.11902	1.84141	2.06717	11.28765	0.91266
4	1.51520	1.53407	1.72159	3.15129	1.76385	1.98011	10.81225	0.87295
5	1.42969	1.44749	1.62443	3.18357	1.69196	1.89941	10.37158	0.83999
6	1.37268	1.38978	1.55966	3.21584	1.62531	1.82458	9.96301	0.81327
7	1.33196	1.34855	1.51340	3.24812	1.56350	1.75520	9.58414	0.79230
8	1.30142	1.31763	1.47870	3.28039	1.50619	1.69085	9.23277	0.77658
9	1.27767	1.29358	1.45171	3.31267	1.45303	1.63118	8.90693	0.76565
10	1.25867	1.27435	1.43012	3.34495	1.40374	1.57584	8.60480	0.75908
11	1.24312	1.25861	1.41245	3.37722	1.35805	1.52455	8.32472	0.75643
12	1.23016	1.24549	1.39773	3.40950	1.31571	1.47703	8.06521	0.75729
13	1.21920	1.23439	1.38528	3.44177	1.27651	1.43302	7.82489	0.76127
14	1.20981	1.22488	1.37460	3.47405	1.24023	1.39229	7.60252	0.76800
15	1.20166	1.21663	1.36535	3.50632	1.20670	1.35465	7.39696	0.77713
16	1.19454	1.20942	1.35725	3.53860	1.17574	1.31989	7.20720	0.78832
17	1.18825	1.20305	1.35011	3.57088	1.14721	1.28786	7.03227	0.80125
18	1.18266	1.19739	1.34376	3.60315	1.12095	1.25839	6.87134	0.81563
19	1.17766	1.19233	1.33808	3.63543	1.09686	1.23134	6.72363	0.83116
20	1.18044	1.18445	1.32923	3.66771	1.07481	1.20658	6.58846	0.84759
21	1.18799	1.18580	1.33075	3.69998	1.05469	1.18400	6.46517	0.86467
22	1.19486	1.18704	1.33214	3.73225	1.03643	1.16350	6.35321	0.88217
23	1.20113	1.18817	1.33340	3.76453	1.01993	1.14497	6.25205	0.89989
24	1.20687	1.18920	1.33456	3.79680	1.00511	1.12834	6.16125	0.91764
25	1.21216	1.19015	1.33563	3.82908	0.99192	1.11354	6.08039	0.93524
26	1.21704	1.19103	1.33662	3.86136	0.98030	1.10048	6.00913	0.95253
27	1.22155	1.19184	1.33753	3.89363	0.97018	1.08913	5.94713	0.96939
28	1.22575	1.19260	1.33838	3.92591	0.96154	1.07943	5.89414	0.98569
29	1.22965	1.19330	1.33917	3.95818	0.95433	1.07133	5.84993	1.00134
30	1.23330	1.19396	1.33990	3.99046	0.94851	1.06481	5.81429	1.01624
31	1.23671	1.19457	1.34059	4.02274	0.94408	1.05982	5.78709	1.03035
32	1.23990	1.19515	1.34124	4.05501	0.94099	1.05636	5.76820	1.04361
33	1.24291	1.19569	1.34184	4.08729	0.93925	1.05441	5.75753	1.05600
34	1.24573	1.19620	1.34241	4.11956	0.93885	1.05396	5.75506	1.06750
35	1.24840	1.19668	1.34295	4.15184	0.93978	1.05500	5.76076	1.07814
36	1.25092	1.19713	1.34346	4.18412	0.94205	1.05755	5.77466	1.08793
37	1.25330	1.19756	1.34394	4.21639	0.94566	1.06160	5.79682	1.09691
38	1.25555	1.19796	1.34440	4.24867	0.95064	1.06719	5.82733	1.10517
39	1.25769	1.19835	1.34483	4.28094	0.95700	1.07434	5.86633	1.11277
40	1.25973	1.19871	1.34524	4.31322	0.96478	1.08306	5.91399	1.11981
41	1.26166	1.19906	1.34563	4.34549	0.97400	1.09341	5.97049	1.12642
42	1.26350	1.19939	1.34600	4.37777	0.98470	1.10543	6.03611	1.13274
43	1.26526	1.19971	1.34636	4.41005	0.99694	1.11916	6.11112	1.13891
44	1.26693	1.20001	1.34670	4.44232	1.01076	1.13468	6.19585	1.14511
45	1.26853	1.20030	1.34702	4.47460	1.02623	1.15205	6.29068	1.15153
46	1.27007	1.20058	1.34733	4.50688	1.04342	1.17134	6.39604	1.15838
47	1.27153	1.20084	1.34763	4.53915	1.06240	1.19265	6.51241	1.16589
48	1.27294	1.20109	1.34791	4.57143	1.08327	1.21608	6.64031	1.17430
49	1.30937	1.24562	1.39788	4.60370	1.10611	1.24172	6.78036	1.21254
50	1.34580	1.29016	1.44786	4.63598	1.13104	1.26971	6.93319	1.25078
51	1.38224	1.33469	1.49783	4.66825	1.15818	1.30018	7.09953	1.28901
52	1.41867	1.37922	1.54781	4.70053	1.18765	1.33327	7.28021	1.32725
53	1.45510	1.42375	1.59778	4.73281	1.21961	1.36914	7.47608	1.36549
54	1.49154	1.46828	1.64776	4.76508	1.25420	1.40797	7.68814	1.40373
55	1.52797	1.51281	1.69773	4.79736	1.29161	1.44997	7.91746	1.44196
56	1.56440	1.55734	1.74771	4.82963	1.33202	1.49534	8.16518	1.48020
57	1.60084	1.60188	1.79768	4.86191	1.37565	1.54432	8.43264	1.51844
58	1.63727	1.64641	1.84766	4.89418	1.42273	1.59717	8.72122	1.55668
59	1.67370	1.69094	1.89763	4.92646	1.47351	1.65417	9.03250	1.59492
60	1.71014	1.73547	1.94761	4.95873	1.52827	1.71565	9.36819	1.63315
61	1.74657	1.78000	1.99758	4.99101	1.58733	1.78194	9.73015	1.67139
62	1.78300	1.82453	2.04756	5.02329	1.65100	1.85342	10.12046	1.70963
63	1.81943	1.86906	2.09753	5.05556	1.71966	1.93050	10.54139	1.74787
64	1.85587	1.91360	2.14751	5.08784	1.79373	2.01366	10.99543	1.78611
65	1.89230	1.95813	2.19748	5.12012	1.87365	2.10337	11.48532	1.82434

Orange 2016 Time Period 2 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	6.20394	6.32461	6.58649	9.75162	1.09115	1.46630	4.43164	14.82264
4	4.43282	4.52171	4.71515	7.78232	1.03594	1.39211	4.20742	12.74496
5	3.48714	3.55389	3.70859	6.63879	0.98440	1.32284	3.99806	11.20612
6	2.90544	2.95614	3.08597	5.84973	0.93624	1.25812	3.80246	10.04461
7	2.51383	2.55243	2.66497	5.24900	0.89122	1.19763	3.61962	9.15275
8	2.27638	2.30143	2.40187	4.82903	0.84911	1.14104	3.44860	8.45716
9	2.09474	2.10934	2.20046	4.46681	0.80971	1.08809	3.28856	7.90685
10	1.94781	1.95453	2.03822	4.14470	0.77281	1.03850	3.13870	7.46568
11	1.82612	1.82683	1.90444	3.85653	0.73824	0.99205	2.99831	7.10760
12	1.72337	1.71945	1.79202	3.59754	0.70584	0.94852	2.86672	6.81350
13	1.63517	1.62772	1.69603	3.36390	0.67546	0.90768	2.74332	6.56919
14	1.55842	1.54828	1.61295	3.15245	0.64695	0.86938	2.62754	6.36391
15	1.49082	1.47867	1.54020	2.96055	0.62019	0.83342	2.51887	6.18949
16	1.43065	1.41705	1.47584	2.78595	0.59506	0.79965	2.41681	6.03957
17	1.37661	1.36200	1.41838	2.62673	0.57146	0.76793	2.32093	5.90920
18	1.32768	1.31244	1.36669	2.48122	0.54927	0.73811	2.23082	5.79448
19	1.28304	1.26750	1.31985	2.34797	0.52841	0.71008	2.14609	5.69236
20	1.22971	1.21664	1.26659	2.22857	0.50879	0.68371	2.06640	5.60037
21	1.17751	1.16888	1.21635	2.12331	0.49033	0.65890	1.99142	5.51659
22	1.12994	1.12540	1.17063	2.02695	0.47295	0.63555	1.92085	5.43950
23	1.08641	1.08565	1.12883	1.93862	0.45659	0.61357	1.85442	5.36790
24	1.04640	1.04916	1.09046	1.85755	0.44119	0.59287	1.79185	5.30084
25	1.00949	1.01554	1.05512	1.78305	0.42668	0.57337	1.73292	5.23764
26	0.97533	0.98447	1.02245	1.71451	0.41301	0.55501	1.67741	5.17774
27	0.94360	0.95565	0.99216	1.65139	0.40013	0.53770	1.62510	5.12078
28	0.91405	0.92885	0.96399	1.59320	0.38799	0.52139	1.57581	5.06648
29	0.88646	0.90385	0.93772	1.53950	0.37656	0.50602	1.52936	5.01469
30	0.86062	0.88048	0.91316	1.48991	0.36578	0.49154	1.48559	4.96527
31	0.83637	0.85858	0.89015	1.44408	0.35562	0.47789	1.44434	4.91823
32	0.81356	0.83801	0.86854	1.40168	0.34605	0.46503	1.40547	4.87352
33	0.79206	0.81865	0.84820	1.36244	0.33704	0.45291	1.36885	4.83122
34	0.77175	0.80039	0.82902	1.32609	0.32854	0.44150	1.33436	4.79134
35	0.75253	0.78315	0.81091	1.29242	0.32055	0.43075	1.30188	4.75394
36	0.73431	0.76682	0.79377	1.26121	0.31302	0.42064	1.27131	4.71909
37	0.71700	0.75135	0.77752	1.23227	0.30594	0.41113	1.24255	4.68680
38	0.70054	0.73666	0.76210	1.20543	0.29928	0.40218	1.21552	4.65713
39	0.68487	0.72269	0.74744	1.18055	0.29303	0.39377	1.19012	4.63008
40	0.66991	0.70939	0.73348	1.15749	0.28716	0.38588	1.16627	4.60564
41	0.65563	0.69672	0.72018	1.13611	0.28165	0.37849	1.14391	4.58381
42	0.64197	0.68461	0.70748	1.11631	0.27649	0.37156	1.12296	4.56449
43	0.62888	0.67304	0.69534	1.09799	0.27167	0.36507	1.10337	4.54754
44	0.61633	0.66197	0.68373	1.08105	0.26717	0.35902	1.08508	4.53289
45	0.60429	0.65137	0.67261	1.06541	0.26297	0.35338	1.06802	4.52032
46	0.59272	0.64120	0.66194	1.05100	0.25906	0.34813	1.05217	4.50961
47	0.58158	0.63143	0.65170	1.03774	0.25544	0.34326	1.03746	4.50041
48	0.57087	0.62200	0.64181	1.02554	0.25209	0.33876	1.02385	4.49238
49	0.56872	0.61990	0.63968	1.01398	0.24900	0.33461	1.01131	4.49238
50	0.56669	0.61793	0.63766	1.00355	0.24617	0.33081	0.99981	4.49238
51	0.56478	0.61606	0.63577	0.99421	0.24359	0.32733	0.98931	4.49238
52	0.56298	0.61431	0.63398	0.98590	0.24124	0.32418	0.97978	4.49238
53	0.56128	0.61265	0.63229	0.97858	0.23913	0.32134	0.97119	4.49238
54	0.55967	0.61108	0.63069	0.97223	0.23724	0.31880	0.96353	4.49238
55	0.55815	0.60959	0.62917	0.96680	0.23558	0.31657	0.95677	4.49238
56	0.57238	0.62192	0.64226	0.96227	0.23413	0.31462	0.95090	4.59477
57	0.58669	0.63432	0.65541	0.95864	0.23290	0.31297	0.94589	4.69718
58	0.60107	0.64679	0.66864	0.95587	0.23187	0.31159	0.94174	4.79957
59	0.61551	0.65932	0.68193	0.95395	0.23106	0.31050	0.93843	4.90197
60	0.63001	0.67190	0.69528	0.95289	0.23045	0.30968	0.93595	5.00437
61	0.64457	0.68455	0.70869	0.95268	0.23004	0.30913	0.93431	5.10676
62	0.65918	0.69724	0.72214	0.95332	0.22984	0.30886	0.93349	5.20916
63	0.67384	0.70999	0.73565	0.95482	0.22984	0.30886	0.93349	5.31156
64	0.68855	0.72278	0.74921	0.95719	0.23004	0.30913	0.93431	5.41396
65	0.70330	0.73561	0.76280	0.96044	0.23045	0.30968	0.93595	5.51635

Orange 2016 Time Period 2 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	52.33731	50.60733	52.69589	60.23039	4.39209	4.83405	35.73105	182.80286
4	41.08897	39.99843	41.64920	55.02997	4.04781	4.45512	32.93021	145.78926
5	34.33998	33.63316	35.02119	50.38921	3.73731	4.11338	30.40421	119.07430
6	29.84067	29.38960	30.60254	46.24153	3.45691	3.80477	28.12306	99.36073
7	26.62685	26.35854	27.44635	42.52864	3.20338	3.52572	26.06049	84.51703
8	24.21646	24.08519	25.07921	39.20003	2.97385	3.27309	24.19316	73.13116
9	22.34177	22.31706	23.23808	36.21155	2.76579	3.04410	22.50056	64.24748
10	20.84200	20.90254	21.76520	33.52452	2.57698	2.83629	20.96448	57.20500
11	19.61493	19.74521	20.56010	31.10532	2.40543	2.64747	19.56886	51.53842
12	18.59233	18.78078	19.55588	28.92421	2.24938	2.47573	18.29942	46.91370
13	17.72708	17.96472	18.70613	26.95528	2.10730	2.31935	17.14355	43.08757
14	16.98543	17.26524	17.97778	25.17564	1.97778	2.17680	16.08990	39.87991
15	16.34268	16.65903	17.34654	23.56537	1.85961	2.04673	15.12853	37.15575
16	15.78028	16.12859	16.79422	22.10663	1.75168	1.92795	14.25052	34.81273
17	15.28402	15.66057	16.30688	20.78391	1.65302	1.81936	13.44790	32.77228
18	14.84292	15.24453	15.87368	19.58333	1.56276	1.72002	12.71362	30.97391
19	14.44823	14.87229	15.48608	18.49274	1.48012	1.62906	12.04130	29.37051
20	13.83934	14.30784	14.89833	17.50137	1.40441	1.54573	11.42534	27.92542
21	13.05157	13.54969	14.10889	16.59961	1.33499	1.46933	10.86061	26.60992
22	12.33542	12.86046	13.39122	15.77900	1.27132	1.39925	10.34261	25.40187
23	11.68154	12.23116	12.73595	15.03198	1.21289	1.33494	9.86727	24.28374
24	11.08215	11.65431	12.13528	14.35187	1.15925	1.27590	9.43091	23.24214
25	10.53071	11.12360	11.58267	13.73271	1.11001	1.22170	9.03027	22.26697
26	10.02169	10.63371	11.07257	13.16920	1.06479	1.17193	8.66241	21.35037
27	9.55037	10.18012	10.60026	12.65663	1.02327	1.12624	8.32466	20.48650
28	9.11273	9.75892	10.16168	12.19078	0.98517	1.08430	8.01466	19.67099
29	8.70526	9.36677	9.75334	11.76796	0.95021	1.04582	7.73026	18.90086
30	8.32495	9.00076	9.37223	11.38482	0.91816	1.01055	7.46953	18.17387
31	7.96919	8.65837	9.01571	11.03839	0.88881	0.97825	7.23075	17.48827
32	7.63565	8.33738	8.68147	10.72609	0.86196	0.94870	7.01234	16.84280
33	7.32234	8.03584	8.36748	10.44559	0.83745	0.92172	6.81294	16.23695
34	7.02745	7.75204	8.07197	10.19482	0.81512	0.89714	6.63124	15.66946
35	6.74941	7.48446	7.79334	9.97198	0.79483	0.87481	6.46615	15.14012
36	6.48682	7.23174	7.53020	9.77550	0.77645	0.85458	6.31667	14.64769
37	6.23843	6.99268	7.28127	9.60400	0.75988	0.83635	6.18187	14.19197
38	6.00310	6.76621	7.04545	9.45629	0.74502	0.81999	6.06098	13.77155
39	5.77985	6.55134	6.82172	9.33134	0.73178	0.80542	5.95328	13.38549
40	5.56776	6.34723	6.60918	9.22834	0.72009	0.79255	5.85814	13.03258
41	5.36601	6.15306	6.40700	9.14657	0.70987	0.78130	5.77502	12.71138
42	5.17387	5.96815	6.21445	9.08549	0.70107	0.77162	5.70345	12.41988
43	4.99067	5.79183	6.03086	9.04471	0.69365	0.76345	5.64303	12.15629
44	4.81579	5.62353	5.85562	9.02392	0.68755	0.75673	5.59342	11.91795
45	4.64869	5.46271	5.68816	9.02303	0.68275	0.75145	5.55435	11.70240
46	4.48885	5.30888	5.52798	9.04199	0.67921	0.74756	5.52560	11.50651
47	4.33582	5.16160	5.37462	9.08095	0.67693	0.74504	5.50700	11.32644
48	4.18916	5.02046	5.22765	9.14017	0.67588	0.74389	5.49848	11.15841
49	4.18916	5.02046	5.22765	9.22005	0.67606	0.74409	5.49997	11.15841
50	4.18916	5.02046	5.22765	9.32109	0.67747	0.74565	5.51147	11.15841
51	4.18916	5.02046	5.22765	9.44399	0.68013	0.74857	5.53306	11.15841
52	4.18916	5.02046	5.22765	9.58961	0.68404	0.75287	5.56486	11.15841
53	4.18916	5.02046	5.22765	9.75889	0.68922	0.75857	5.60703	11.15841
54	4.18916	5.02046	5.22765	9.95306	0.69571	0.76572	5.65982	11.15841
55	4.18916	5.02046	5.22765	10.17343	0.70354	0.77433	5.72351	11.15841
56	4.57272	5.42596	5.64989	10.42159	0.71275	0.78447	5.79846	13.84567
57	4.95630	5.83147	6.07213	10.69931	0.72340	0.79619	5.88509	16.53294
58	5.33987	6.23697	6.49437	11.00862	0.73555	0.80956	5.98390	19.22018
59	5.72344	6.64248	6.91662	11.35183	0.74926	0.82465	6.09544	21.90744
60	6.10701	7.04798	7.33886	11.73152	0.76462	0.84156	6.22038	24.59471
61	6.49058	7.45349	7.76110	12.15061	0.78171	0.86037	6.35945	27.28197
62	6.87415	7.85900	8.18334	12.61238	0.80064	0.88121	6.51346	29.96919
63	7.25772	8.26451	8.60558	13.12055	0.82152	0.90419	6.68336	32.65651
64	7.64129	8.67001	9.02783	13.67924	0.84449	0.92947	6.87019	35.34375
65	8.02486	9.07551	9.45006	14.29310	0.86968	0.95719	7.07510	38.03102

Orange 2016 Time Period 2 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HdGV	LDDV	LDDT	HDDV	MC
3	1.68360	1.70439	1.91249	3.16979	1.84141	2.06717	11.28765	0.82775
4	1.53886	1.55786	1.74807	3.20259	1.76385	1.98011	10.81225	0.79173
5	1.45201	1.46995	1.64942	3.23539	1.69196	1.89941	10.37158	0.76184
6	1.39412	1.41133	1.58365	3.26819	1.62531	1.82458	9.96301	0.73761
7	1.35276	1.36947	1.53667	3.30099	1.56350	1.75520	9.58414	0.71858
8	1.32175	1.33807	1.50144	3.33379	1.50619	1.69085	9.23277	0.70432
9	1.29762	1.31365	1.47404	3.36660	1.45303	1.63118	8.90693	0.69442
10	1.27833	1.29411	1.45212	3.39940	1.40374	1.57584	8.60480	0.68845
11	1.26253	1.27813	1.43418	3.43219	1.35805	1.52455	8.32472	0.68605
12	1.24938	1.26481	1.41923	3.46500	1.31571	1.47703	8.06521	0.68683
13	1.23824	1.25353	1.40658	3.49780	1.27651	1.43302	7.82489	0.69044
14	1.22870	1.24388	1.39574	3.53060	1.24023	1.39229	7.60252	0.69655
15	1.22043	1.23550	1.38635	3.56340	1.20670	1.35465	7.39696	0.70483
16	1.21319	1.22818	1.37813	3.59620	1.17574	1.31989	7.20720	0.71498
17	1.20681	1.22171	1.37087	3.62901	1.14721	1.28786	7.03227	0.72671
18	1.20113	1.21597	1.36443	3.66181	1.12095	1.25839	6.87134	0.73974
19	1.19605	1.21082	1.35866	3.69461	1.09686	1.23134	6.72363	0.75383
20	1.19888	1.20282	1.34967	3.72741	1.07481	1.20658	6.58846	0.76873
21	1.20655	1.20420	1.35122	3.76021	1.05469	1.18400	6.46517	0.78422
22	1.21352	1.20545	1.35263	3.79301	1.03643	1.16350	6.35321	0.80010
23	1.21988	1.20660	1.35391	3.82581	1.01993	1.14497	6.25205	0.81617
24	1.22572	1.20765	1.35509	3.85861	1.00511	1.12834	6.16125	0.83226
25	1.23108	1.20861	1.35617	3.89141	0.99192	1.11354	6.08039	0.84822
26	1.23604	1.20950	1.35718	3.92421	0.98030	1.10048	6.00913	0.86391
27	1.24063	1.21033	1.35810	3.95702	0.97018	1.08913	5.94713	0.87920
28	1.24489	1.21110	1.35896	3.98981	0.96154	1.07943	5.89414	0.89398
29	1.24886	1.21181	1.35977	4.02262	0.95433	1.07133	5.84993	0.90817
30	1.25256	1.21248	1.36051	4.05542	0.94851	1.06481	5.81429	0.92169
31	1.25602	1.21310	1.36121	4.08822	0.94408	1.05982	5.78709	0.93449
32	1.25927	1.21369	1.36187	4.12102	0.94099	1.05636	5.76820	0.94652
33	1.26232	1.21423	1.36248	4.15382	0.93925	1.05441	5.75753	0.95775
34	1.26519	1.21475	1.36306	4.18662	0.93885	1.05396	5.75506	0.96819
35	1.26790	1.21524	1.36361	4.21943	0.93978	1.05500	5.76076	0.97783
36	1.27045	1.21570	1.36413	4.25223	0.94205	1.05755	5.77466	0.98671
37	1.27287	1.21613	1.36461	4.28503	0.94566	1.06160	5.79682	0.99486
38	1.27516	1.21654	1.36507	4.31783	0.95064	1.06719	5.82733	1.00234
39	1.27734	1.21694	1.36551	4.35063	0.95700	1.07434	5.86633	1.00924
40	1.27940	1.21731	1.36593	4.38343	0.96478	1.08306	5.91399	1.01563
41	1.28136	1.21766	1.36633	4.41623	0.97400	1.09341	5.97049	1.02162
42	1.28323	1.21800	1.36671	4.44903	0.98470	1.10543	6.03611	1.02735
43	1.28502	1.21832	1.36707	4.48183	0.99694	1.11916	6.11112	1.03294
44	1.28672	1.21863	1.36741	4.51464	1.01076	1.13468	6.19585	1.03857
45	1.28835	1.21892	1.36774	4.54744	1.02623	1.15205	6.29068	1.04439
46	1.28990	1.21920	1.36805	4.58024	1.04342	1.17134	6.39604	1.05060
47	1.29139	1.21947	1.36835	4.61304	1.06240	1.19265	6.51241	1.05741
48	1.29282	1.21972	1.36864	4.64584	1.08327	1.21608	6.64031	1.06504
49	1.32982	1.26494	1.41938	4.67864	1.10611	1.24172	6.78036	1.09972
50	1.36682	1.31017	1.47013	4.71144	1.13104	1.26971	6.93319	1.13440
51	1.40382	1.35539	1.52087	4.74424	1.15818	1.30018	7.09953	1.16908
52	1.44083	1.40061	1.57162	4.77705	1.18765	1.33327	7.28021	1.20376
53	1.47783	1.44583	1.62236	4.80985	1.21961	1.36914	7.47608	1.23844
54	1.51483	1.49105	1.67310	4.84265	1.25420	1.40797	7.68814	1.27312
55	1.55183	1.53628	1.72385	4.87545	1.29161	1.44997	7.91746	1.30780
56	1.58883	1.58150	1.77459	4.90825	1.33202	1.49534	8.16518	1.34248
57	1.62583	1.62672	1.82533	4.94105	1.37565	1.54432	8.43264	1.37716
58	1.66284	1.67194	1.87608	4.97385	1.42273	1.59717	8.72122	1.41185
59	1.69984	1.71717	1.92682	5.00665	1.47351	1.65417	9.03250	1.44652
60	1.73684	1.76239	1.97756	5.03946	1.52827	1.71565	9.36819	1.48121
61	1.77384	1.80761	2.02831	5.07226	1.58733	1.78194	9.73015	1.51589
62	1.81084	1.85283	2.07905	5.10506	1.65100	1.85342	10.12046	1.55057
63	1.84785	1.89806	2.12979	5.13786	1.71966	1.93050	10.54139	1.58525
64	1.88485	1.94328	2.18054	5.17066	1.79373	2.01366	10.99543	1.61993
65	1.92185	1.98850	2.23128	5.20346	1.87365	2.10337	11.48532	1.65461

Orange 2016 Time Period 3 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	6.42147	6.50052	6.76551	10.13942	1.09115	1.46630	4.43164	15.00523
4	4.56305	4.62150	4.81652	8.02877	1.03594	1.39211	4.20742	12.92910
5	3.57574	3.61852	3.77409	6.81733	0.98440	1.32284	3.99806	11.39142
6	2.97076	3.00171	3.13203	5.98980	0.93624	1.25812	3.80246	10.23079
7	2.56470	2.58653	2.69933	5.36480	0.89122	1.19763	3.61962	9.33959
8	2.32162	2.33130	2.43192	4.93440	0.84911	1.14104	3.44860	8.64453
9	2.13584	2.13633	2.22756	4.56431	0.80971	1.08809	3.28856	8.09463
10	1.98540	1.97925	2.06300	4.23552	0.77281	1.03850	3.13870	7.65379
11	1.86065	1.84973	1.92736	3.94158	0.73824	0.99205	2.99831	7.29598
12	1.75518	1.74088	1.81343	3.67751	0.70584	0.94852	2.86672	7.00210
13	1.66454	1.64793	1.71618	3.43934	0.67546	0.90768	2.74332	6.75797
14	1.58555	1.56747	1.63206	3.22381	0.64695	0.86938	2.62754	6.55286
15	1.51587	1.49700	1.55843	3.02818	0.62019	0.83342	2.51887	6.37856
16	1.45377	1.43466	1.49332	2.85017	0.59506	0.79965	2.41681	6.22875
17	1.39790	1.37899	1.43523	2.68779	0.57146	0.76793	2.32093	6.09848
18	1.34723	1.32891	1.38300	2.53935	0.54927	0.73811	2.23082	5.98385
19	1.30093	1.28351	1.33569	2.40336	0.52841	0.71008	2.14609	5.88180
20	1.24637	1.23217	1.28193	2.28174	0.50879	0.68371	2.06640	5.78988
21	1.19353	1.18382	1.23109	2.17497	0.49033	0.65890	1.99142	5.70617
22	1.14538	1.13980	1.18482	2.07722	0.47295	0.63555	1.92085	5.62914
23	1.10129	1.09956	1.14252	1.98761	0.45659	0.61357	1.85442	5.55758
24	1.06078	1.06261	1.10369	1.90536	0.44119	0.59287	1.79185	5.49058
25	1.02339	1.02857	1.06792	1.82977	0.42668	0.57337	1.73292	5.42742
26	0.98878	0.99709	1.03484	1.76022	0.41301	0.55501	1.67741	5.36758
27	0.95664	0.96790	1.00417	1.69615	0.40013	0.53770	1.62510	5.31066
28	0.92669	0.94075	0.97564	1.63708	0.38799	0.52139	1.57581	5.25640
29	0.89872	0.91542	0.94904	1.58256	0.37656	0.50602	1.52936	5.20464
30	0.87252	0.89174	0.92416	1.53220	0.36578	0.49154	1.48559	5.15527
31	0.84793	0.86954	0.90085	1.48563	0.35562	0.47789	1.44434	5.10825
32	0.82479	0.84869	0.87896	1.44255	0.34605	0.46503	1.40547	5.06358
33	0.80298	0.82906	0.85835	1.40267	0.33704	0.45291	1.36885	5.02131
34	0.78237	0.81055	0.83891	1.36572	0.32854	0.44150	1.33436	4.98146
35	0.76286	0.79306	0.82055	1.33146	0.32055	0.43075	1.30188	4.94409
36	0.74436	0.77650	0.80318	1.29971	0.31302	0.42064	1.27131	4.90926
37	0.72679	0.76081	0.78671	1.27025	0.30594	0.41113	1.24255	4.87700
38	0.71007	0.74590	0.77107	1.24293	0.29928	0.40218	1.21552	4.84735
39	0.69414	0.73173	0.75620	1.21758	0.29303	0.39377	1.19012	4.82033
40	0.67895	0.71823	0.74204	1.19406	0.28716	0.38588	1.16627	4.79591
41	0.66443	0.70536	0.72854	1.17226	0.28165	0.37849	1.14391	4.77409
42	0.65053	0.69307	0.71565	1.15205	0.27649	0.37156	1.12296	4.75478
43	0.63722	0.68132	0.70333	1.13334	0.27167	0.36507	1.10337	4.73785
44	0.62446	0.67007	0.69154	1.11602	0.26717	0.35902	1.08508	4.72321
45	0.61220	0.65930	0.68025	1.10003	0.26297	0.35338	1.06802	4.71065
46	0.60042	0.64897	0.66942	1.08527	0.25906	0.34813	1.05217	4.69994
47	0.58909	0.63904	0.65902	1.07169	0.25544	0.34326	1.03746	4.69075
48	0.57817	0.62945	0.64897	1.05916	0.25209	0.33876	1.02385	4.68273
49	0.57583	0.62717	0.64664	1.04724	0.24900	0.33461	1.01131	4.68273
50	0.57363	0.62501	0.64445	1.03648	0.24617	0.33081	0.99981	4.68273
51	0.57155	0.62299	0.64239	1.02682	0.24359	0.32733	0.98931	4.68273
52	0.56959	0.62108	0.64044	1.01822	0.24124	0.32418	0.97978	4.68273
53	0.56774	0.61927	0.63860	1.01063	0.23913	0.32134	0.97119	4.68273
54	0.56599	0.61756	0.63686	1.00401	0.23724	0.31880	0.96353	4.68273
55	0.56433	0.61594	0.63521	0.99835	0.23558	0.31657	0.95677	4.68273
56	0.57844	0.62815	0.64817	0.99360	0.23413	0.31462	0.95090	4.78505
57	0.59262	0.64043	0.66120	0.98976	0.23290	0.31297	0.94589	4.88737
58	0.60689	0.65278	0.67431	0.98680	0.23187	0.31159	0.94174	4.98969
59	0.62122	0.66521	0.68749	0.98471	0.23106	0.31050	0.93843	5.09201
60	0.63562	0.67769	0.70074	0.98348	0.23045	0.30968	0.93595	5.19433
61	0.65008	0.69024	0.71405	0.98311	0.23004	0.30913	0.93431	5.29665
62	0.66460	0.70284	0.72741	0.98361	0.22984	0.30886	0.93349	5.39897
63	0.67917	0.71550	0.74083	0.98498	0.22984	0.30886	0.93349	5.50129
64	0.69379	0.72821	0.75430	0.98723	0.23004	0.30913	0.93431	5.60361
65	0.70846	0.74096	0.76782	0.99037	0.23045	0.30968	0.93595	5.70593

Orange 2016 Time Period 3 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	52.33731	50.60733	52.69589	60.46523	4.39209	4.83405	35.73105	187.35896
4	41.08897	39.99843	41.64920	55.24452	4.04781	4.45512	32.93021	149.42287
5	34.33998	33.63316	35.02119	50.58566	3.73731	4.11338	30.40421	122.04205
6	29.84067	29.38960	30.60254	46.42178	3.45691	3.80477	28.12306	101.83716
7	26.62685	26.35854	27.44635	42.69444	3.20338	3.52572	26.06049	86.62347
8	24.21646	24.08519	25.07921	39.35283	2.97385	3.27309	24.19316	74.95386
9	22.34177	22.31706	23.23808	36.35269	2.76579	3.04410	22.50056	65.84877
10	20.84200	20.90254	21.76520	33.65521	2.57698	2.83629	20.96448	58.63077
11	19.61493	19.74521	20.56010	31.22658	2.40543	2.64747	19.56886	52.82292
12	18.59233	18.78078	19.55588	29.03694	2.24938	2.47573	18.29942	48.08295
13	17.72708	17.96472	18.70613	27.06035	2.10730	2.31935	17.14355	44.16147
14	16.98543	17.26524	17.97778	25.27380	1.97778	2.17680	16.08990	40.87386
15	16.34268	16.65903	17.34654	23.65724	1.85961	2.04673	15.12853	38.08183
16	15.78028	16.12859	16.79422	22.19281	1.75168	1.92795	14.25052	35.68037
17	15.28402	15.66057	16.30688	20.86491	1.65302	1.81936	13.44790	33.58905
18	14.84292	15.24453	15.87368	19.65967	1.56276	1.72002	12.71362	31.74586
19	14.44823	14.87229	15.48608	18.56483	1.48012	1.62906	12.04130	30.10251
20	13.83934	14.30784	14.89833	17.56960	1.40441	1.54573	11.42534	28.62141
21	13.05157	13.54969	14.10889	16.66432	1.33499	1.46933	10.86061	27.27316
22	12.33542	12.86046	13.39122	15.84052	1.27132	1.39925	10.34261	26.03497
23	11.68154	12.23116	12.73595	15.09058	1.21289	1.33494	9.86727	24.88896
24	11.08215	11.65431	12.13528	14.40782	1.15925	1.27590	9.43091	23.82143
25	10.53071	11.12360	11.58267	13.78624	1.11001	1.22170	9.03027	22.82195
26	10.02169	10.63371	11.07257	13.22054	1.06479	1.17193	8.66241	21.88246
27	9.55037	10.18012	10.60026	12.70597	1.02327	1.12624	8.32466	20.99707
28	9.11273	9.75892	10.16168	12.23830	0.98517	1.08430	8.01466	20.16125
29	8.70526	9.36677	9.75334	11.81384	0.95021	1.04582	7.73026	19.37192
30	8.32495	9.00076	9.37223	11.42919	0.91816	1.01055	7.46953	18.62685
31	7.96919	8.65837	9.01571	11.08142	0.88881	0.97825	7.23075	17.92415
32	7.63565	8.33738	8.68147	10.76791	0.86196	0.94870	7.01234	17.26257
33	7.32234	8.03584	8.36748	10.48631	0.83745	0.92172	6.81294	16.64163
34	7.02745	7.75204	8.07197	10.23457	0.81512	0.89714	6.63124	16.06000
35	6.74941	7.48446	7.79334	10.01086	0.79483	0.87481	6.46615	15.51746
36	6.48682	7.23174	7.53020	9.81361	0.77645	0.85458	6.31667	15.01276
37	6.23843	6.99268	7.28127	9.64143	0.75988	0.83635	6.18187	14.54569
38	6.00310	6.76621	7.04545	9.49315	0.74502	0.81999	6.06098	14.11479
39	5.77985	6.55134	6.82172	9.36772	0.73178	0.80542	5.95328	13.71911
40	5.56776	6.34723	6.60918	9.26432	0.72009	0.79255	5.85814	13.35740
41	5.36601	6.15306	6.40700	9.18223	0.70987	0.78130	5.77502	13.02819
42	5.17387	5.96815	6.21445	9.12091	0.70107	0.77162	5.70345	12.72943
43	4.99067	5.79183	6.03086	9.07996	0.69365	0.76345	5.64303	12.45927
44	4.81579	5.62353	5.85562	9.05910	0.68755	0.75673	5.59342	12.21498
45	4.64869	5.46271	5.68816	9.05820	0.68275	0.75145	5.55435	11.99406
46	4.48885	5.30888	5.52798	9.07724	0.67921	0.74756	5.52560	11.79329
47	4.33582	5.16160	5.37462	9.11636	0.67693	0.74504	5.50700	11.60874
48	4.18916	5.02046	5.22765	9.17581	0.67588	0.74389	5.49848	11.43651
49	4.18916	5.02046	5.22765	9.25599	0.67606	0.74409	5.49997	11.43651
50	4.18916	5.02046	5.22765	9.35742	0.67747	0.74565	5.51147	11.43651
51	4.18916	5.02046	5.22765	9.48081	0.68013	0.74857	5.53306	11.43651
52	4.18916	5.02046	5.22765	9.62699	0.68404	0.75287	5.56486	11.43651
53	4.18916	5.02046	5.22765	9.79694	0.68922	0.75857	5.60703	11.43651
54	4.18916	5.02046	5.22765	9.99186	0.69571	0.76572	5.65982	11.43651
55	4.18916	5.02046	5.22765	10.21309	0.70354	0.77433	5.72351	11.43651
56	4.57272	5.42596	5.64989	10.46221	0.71275	0.78447	5.79846	14.19075
57	4.95630	5.83147	6.07213	10.74102	0.72340	0.79619	5.88509	16.94501
58	5.33987	6.23697	6.49437	11.05154	0.73555	0.80956	5.98390	19.69920
59	5.72344	6.64248	6.91662	11.39609	0.74926	0.82465	6.09544	22.45346
60	6.10701	7.04798	7.33886	11.77725	0.76462	0.84156	6.22038	25.20769
61	6.49058	7.45349	7.76110	12.19798	0.78171	0.86037	6.35945	27.96194
62	6.87415	7.85900	8.18334	12.66155	0.80064	0.88121	6.51346	30.71614
63	7.25772	8.26451	8.60558	13.17169	0.82152	0.90419	6.68336	33.47043
64	7.64129	8.67001	9.02783	13.73257	0.84449	0.92947	6.87019	36.22466
65	8.02486	9.07551	9.45006	14.34882	0.86968	0.95719	7.07510	38.97890

Orange 2016 Time Period 3 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	1.68635	1.70716	1.91556	3.17592	1.84141	2.06717	11.28765	0.81913
4	1.54137	1.56039	1.75088	3.20879	1.76385	1.98011	10.81225	0.78349
5	1.45439	1.47233	1.65207	3.24165	1.69196	1.89941	10.37158	0.75391
6	1.39639	1.41362	1.58620	3.27451	1.62531	1.82458	9.96301	0.72993
7	1.35497	1.37169	1.53915	3.30738	1.56350	1.75520	9.58414	0.71110
8	1.32391	1.34024	1.50386	3.34024	1.50619	1.69085	9.23277	0.69700
9	1.29974	1.31578	1.47641	3.37311	1.45303	1.63118	8.90693	0.68719
10	1.28041	1.29621	1.45445	3.40597	1.40374	1.57584	8.60480	0.68129
11	1.26460	1.28020	1.43649	3.43884	1.35805	1.52455	8.32472	0.67891
12	1.25142	1.26686	1.42152	3.47170	1.31571	1.47703	8.06521	0.67968
13	1.24027	1.25557	1.40885	3.50457	1.27651	1.43302	7.82489	0.68326
14	1.23071	1.24589	1.39799	3.53743	1.24023	1.39229	7.60252	0.68930
15	1.22242	1.23751	1.38858	3.57030	1.20670	1.35465	7.39696	0.69750
16	1.21517	1.23017	1.38035	3.60316	1.17574	1.31989	7.20720	0.70754
17	1.20878	1.22369	1.37308	3.63602	1.14721	1.28786	7.03227	0.71914
18	1.20309	1.21794	1.36662	3.66889	1.12095	1.25839	6.87134	0.73204
19	1.19801	1.21279	1.36084	3.70176	1.09686	1.23134	6.72363	0.74598
20	1.20084	1.20477	1.35184	3.73462	1.07481	1.20658	6.58846	0.76073
21	1.20852	1.20615	1.35340	3.76748	1.05469	1.18400	6.46517	0.77606
22	1.21550	1.20741	1.35481	3.80035	1.03643	1.16350	6.35321	0.79177
23	1.22188	1.20856	1.35609	3.83321	1.01993	1.14497	6.25205	0.80768
24	1.22772	1.20961	1.35727	3.86608	1.00511	1.12834	6.16125	0.82360
25	1.23310	1.21057	1.35836	3.89894	0.99192	1.11354	6.08039	0.83940
26	1.23806	1.21147	1.35936	3.93180	0.98030	1.10048	6.00913	0.85492
27	1.24266	1.21229	1.36029	3.96467	0.97018	1.08913	5.94713	0.87005
28	1.24692	1.21306	1.36115	3.99753	0.96154	1.07943	5.89414	0.88468
29	1.25090	1.21378	1.36195	4.03040	0.95433	1.07133	5.84993	0.89872
30	1.25461	1.21445	1.36270	4.06326	0.94851	1.06481	5.81429	0.91210
31	1.25807	1.21507	1.36340	4.09613	0.94408	1.05982	5.78709	0.92477
32	1.26133	1.21566	1.36406	4.12899	0.94099	1.05636	5.76820	0.93667
33	1.26438	1.21621	1.36468	4.16186	0.93925	1.05441	5.75753	0.94779
34	1.26726	1.21672	1.36526	4.19472	0.93885	1.05396	5.75506	0.95811
35	1.26997	1.21721	1.36580	4.22759	0.93978	1.05500	5.76076	0.96766
36	1.27253	1.21767	1.36632	4.26045	0.94205	1.05755	5.77466	0.97644
37	1.27495	1.21811	1.36681	4.29332	0.94566	1.06160	5.79682	0.98451
38	1.27724	1.21852	1.36727	4.32618	0.95064	1.06719	5.82733	0.99191
39	1.27942	1.21891	1.36771	4.35905	0.95700	1.07434	5.86633	0.99874
40	1.28149	1.21928	1.36813	4.39191	0.96478	1.08306	5.91399	1.00506
41	1.28346	1.21964	1.36853	4.42477	0.97400	1.09341	5.97049	1.01099
42	1.28533	1.21997	1.36891	4.45764	0.98470	1.10543	6.03611	1.01666
43	1.28712	1.22030	1.36927	4.49051	0.99694	1.11916	6.11112	1.02219
44	1.28882	1.22060	1.36961	4.52337	1.01076	1.13468	6.19585	1.02776
45	1.29045	1.22090	1.36994	4.55623	1.02623	1.15205	6.29068	1.03352
46	1.29201	1.22118	1.37026	4.58910	1.04342	1.17134	6.39604	1.03967
47	1.29350	1.22145	1.37056	4.62196	1.06240	1.19265	6.51241	1.04641
48	1.29493	1.22170	1.37085	4.65483	1.08327	1.21608	6.64031	1.05396
49	1.33199	1.26700	1.42167	4.68769	1.10611	1.24172	6.78036	1.08828
50	1.36906	1.31229	1.47250	4.72056	1.13104	1.26971	6.93319	1.12260
51	1.40612	1.35759	1.52332	4.75342	1.15818	1.30018	7.09953	1.15692
52	1.44318	1.40288	1.57415	4.78629	1.18765	1.33327	7.28021	1.19124
53	1.48024	1.44818	1.62497	4.81915	1.21961	1.36914	7.47608	1.22556
54	1.51731	1.49348	1.67579	4.85202	1.25420	1.40797	7.68814	1.25988
55	1.55437	1.53877	1.72662	4.88488	1.29161	1.44997	7.91746	1.29420
56	1.59143	1.58407	1.77745	4.91775	1.33202	1.49534	8.16518	1.32852
57	1.62849	1.62936	1.82827	4.95061	1.37565	1.54432	8.43264	1.36284
58	1.66556	1.67466	1.87910	4.98347	1.42273	1.59717	8.72122	1.39716
59	1.70262	1.71995	1.92992	5.01634	1.47351	1.65417	9.03250	1.43147
60	1.73968	1.76525	1.98075	5.04921	1.52827	1.71565	9.36819	1.46579
61	1.77674	1.81054	2.03157	5.08207	1.58733	1.78194	9.73015	1.50011
62	1.81380	1.85584	2.08240	5.11493	1.65100	1.85342	10.12046	1.53443
63	1.85087	1.90114	2.13322	5.14780	1.71966	1.93050	10.54139	1.56875
64	1.88793	1.94643	2.18405	5.18066	1.79373	2.01366	10.99543	1.60307
65	1.92499	1.99173	2.23487	5.21353	1.87365	2.10337	11.48532	1.63739

Orange 2016 Time Period 4 VOC Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	5.29538	5.59343	5.84370	8.17369	1.09115	1.46630	4.43164	13.35663
4	3.88499	4.10353	4.29170	6.77819	1.03594	1.39211	4.20742	11.25696
5	3.11136	3.28004	3.43240	5.90594	0.98440	1.32284	3.99806	9.70184
6	2.62585	2.76040	2.88949	5.26740	0.93624	1.25812	3.80246	8.52804
7	2.29388	2.40360	2.51637	4.75937	0.89122	1.19763	3.61962	7.62674
8	2.07953	2.17001	2.27106	4.37546	0.84911	1.14104	3.44860	6.92379
9	1.91485	1.98980	2.08180	4.03941	0.80971	1.08809	3.28856	6.36765
10	1.78227	1.84433	1.92910	3.73910	0.77281	1.03850	3.13870	5.92181
11	1.67304	1.72411	1.80299	3.46956	0.73824	0.99205	2.99831	5.55994
12	1.58132	1.62283	1.69681	3.22681	0.70584	0.94852	2.86672	5.26273
13	1.50307	1.53612	1.60598	3.00756	0.67546	0.90768	2.74332	5.01584
14	1.43540	1.46086	1.52719	2.80905	0.64695	0.86938	2.62754	4.80839
15	1.37619	1.39476	1.45804	2.62892	0.62019	0.83342	2.51887	4.63212
16	1.32386	1.33610	1.39673	2.46513	0.59506	0.79965	2.41681	4.48061
17	1.27720	1.28356	1.34187	2.31595	0.57146	0.76793	2.32093	4.34886
18	1.23526	1.23614	1.29238	2.17982	0.54927	0.73811	2.23082	4.23293
19	1.19730	1.19301	1.24742	2.05539	0.52841	0.71008	2.14609	4.12972
20	1.14897	1.14411	1.19616	1.94290	0.50879	0.68371	2.06640	4.03676
21	1.09947	1.09866	1.14829	1.84199	0.49033	0.65890	1.99142	3.95210
22	1.05439	1.05730	1.10473	1.74963	0.47295	0.63555	1.92085	3.87419
23	1.01317	1.01950	1.06491	1.66500	0.45659	0.61357	1.85442	3.80183
24	0.97533	0.98482	1.02838	1.58735	0.44119	0.59287	1.79185	3.73407
25	0.94044	0.95287	0.99473	1.51605	0.42668	0.57337	1.73292	3.67019
26	0.90818	0.92334	0.96363	1.45049	0.41301	0.55501	1.67741	3.60967
27	0.87825	0.89596	0.93481	1.39016	0.40013	0.53770	1.62510	3.55210
28	0.85041	0.87051	0.90801	1.33460	0.38799	0.52139	1.57581	3.49723
29	0.82443	0.84677	0.88302	1.28338	0.37656	0.50602	1.52936	3.44488
30	0.80013	0.82459	0.85967	1.23614	0.36578	0.49154	1.48559	3.39495
31	0.77735	0.80382	0.83780	1.19252	0.35562	0.47789	1.44434	3.34740
32	0.75595	0.78431	0.81727	1.15224	0.34605	0.46503	1.40547	3.30223
33	0.73580	0.76595	0.79795	1.11501	0.33704	0.45291	1.36885	3.25948
34	0.71678	0.74865	0.77974	1.08059	0.32854	0.44150	1.33436	3.21917
35	0.69881	0.73231	0.76255	1.04875	0.32055	0.43075	1.30188	3.18138
36	0.68180	0.71685	0.74628	1.01929	0.31302	0.42064	1.27131	3.14616
37	0.66566	0.70220	0.73087	0.99205	0.30594	0.41113	1.24255	3.11353
38	0.65033	0.68830	0.71625	0.96684	0.29928	0.40218	1.21552	3.08354
39	0.63575	0.67508	0.70235	0.94352	0.29303	0.39377	1.19012	3.05621
40	0.62186	0.66251	0.68913	0.92196	0.28716	0.38588	1.16627	3.03151
41	0.60860	0.65052	0.67653	0.90205	0.28165	0.37849	1.14391	3.00945
42	0.59595	0.63909	0.66450	0.88366	0.27649	0.37156	1.12296	2.98992
43	0.58384	0.62816	0.65302	0.86670	0.27167	0.36507	1.10337	2.97280
44	0.57225	0.61771	0.64203	0.85108	0.26717	0.35902	1.08508	2.95799
45	0.56114	0.60770	0.63152	0.83672	0.26297	0.35338	1.06802	2.94529
46	0.55048	0.59811	0.62144	0.82356	0.25906	0.34813	1.05217	2.93446
47	0.54024	0.58891	0.61177	0.81152	0.25544	0.34326	1.03746	2.92517
48	0.53040	0.58004	0.60245	0.80051	0.25209	0.33876	1.02385	2.91705
49	0.52905	0.57872	0.60111	0.79028	0.24900	0.33461	1.01131	2.91705
50	0.52777	0.57748	0.59984	0.78110	0.24617	0.33081	0.99981	2.91705
51	0.52656	0.57631	0.59865	0.77292	0.24359	0.32733	0.98931	2.91705
52	0.52543	0.57520	0.59752	0.76572	0.24124	0.32418	0.97978	2.91705
53	0.52435	0.57415	0.59645	0.75944	0.23913	0.32134	0.97119	2.91705
54	0.52333	0.57317	0.59545	0.75406	0.23724	0.31880	0.96353	2.91705
55	0.52237	0.57223	0.59449	0.74956	0.23558	0.31657	0.95677	2.91705
56	0.53714	0.58508	0.60810	0.74592	0.23413	0.31462	0.95090	3.02053
57	0.55195	0.59797	0.62176	0.74311	0.23290	0.31297	0.94589	3.12401
58	0.56680	0.61090	0.63547	0.74113	0.23187	0.31159	0.94174	3.22749
59	0.58170	0.62387	0.64921	0.73996	0.23106	0.31050	0.93843	3.33097
60	0.59663	0.63688	0.66299	0.73961	0.23045	0.30968	0.93595	3.43445
61	0.61160	0.64993	0.67680	0.74007	0.23004	0.30913	0.93431	3.53794
62	0.62660	0.66301	0.69065	0.74134	0.22984	0.30886	0.93349	3.64142
63	0.64163	0.67611	0.70453	0.74345	0.22984	0.30886	0.93349	3.74490
64	0.65669	0.68925	0.71844	0.74639	0.23004	0.30913	0.93431	3.84838
65	0.67178	0.70241	0.73237	0.75019	0.23045	0.30968	0.93595	3.95186

Orange 2016 Time Period 4 CO Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	52.33731	50.60733	52.69589	60.23039	4.39209	4.83405	35.73105	151.06026
4	41.08897	39.99843	41.64920	55.02997	4.04781	4.45512	32.93021	120.47386
5	34.33998	33.63316	35.02119	50.38921	3.73731	4.11338	30.40421	98.39778
6	29.84067	29.38960	30.60254	46.24153	3.45691	3.80477	28.12306	82.10736
7	26.62685	26.35854	27.44635	42.52864	3.20338	3.52572	26.06049	69.84114
8	24.21646	24.08519	25.07921	39.20003	2.97385	3.27309	24.19316	60.43237
9	22.34177	22.31706	23.23808	36.21155	2.76579	3.04410	22.50056	53.09129
10	20.84200	20.90254	21.76520	33.52452	2.57698	2.83629	20.96448	47.27171
11	19.61493	19.74521	20.56010	31.10532	2.40543	2.64747	19.56886	42.58907
12	18.59233	18.78078	19.55588	28.92421	2.24938	2.47573	18.29942	38.76743
13	17.72708	17.96472	18.70613	26.95528	2.10730	2.31935	17.14355	35.60567
14	16.98543	17.26524	17.97778	25.17564	1.97778	2.17680	16.08990	32.95503
15	16.34268	16.65903	17.34654	23.56537	1.85961	2.04673	15.12853	30.70390
16	15.78028	16.12859	16.79422	22.10663	1.75168	1.92795	14.25052	28.76770
17	15.28402	15.66057	16.30688	20.78391	1.65302	1.81936	13.44790	27.08157
18	14.84292	15.24453	15.87368	19.58333	1.56276	1.72002	12.71362	25.59547
19	14.44823	14.87229	15.48608	18.49274	1.48012	1.62906	12.04130	24.27049
20	13.83934	14.30784	14.89833	17.50137	1.40441	1.54573	11.42534	23.07632
21	13.05157	13.54969	14.10889	16.59961	1.33499	1.46933	10.86061	21.98929
22	12.33542	12.86046	13.39122	15.77900	1.27132	1.39925	10.34261	20.99098
23	11.68154	12.23116	12.73595	15.03198	1.21289	1.33494	9.86727	20.06700
24	11.08215	11.65431	12.13528	14.35187	1.15925	1.27590	9.43091	19.20630
25	10.53071	11.12360	11.58267	13.73271	1.11001	1.22170	9.03027	18.40047
26	10.02169	10.63371	11.07257	13.16920	1.06479	1.17193	8.66241	17.64301
27	9.55037	10.18012	10.60026	12.65663	1.02327	1.12624	8.32466	16.92914
28	9.11273	9.75892	10.16168	12.19078	0.98517	1.08430	8.01466	16.25525
29	8.70526	9.36677	9.75334	11.76796	0.95021	1.04582	7.73026	15.61885
30	8.32495	9.00076	9.37223	11.38482	0.91816	1.01055	7.46953	15.01811
31	7.96919	8.65837	9.01571	11.03839	0.88881	0.97825	7.23075	14.45155
32	7.63565	8.33738	8.68147	10.72609	0.86196	0.94870	7.01234	13.91817
33	7.32234	8.03584	8.36748	10.44559	0.83745	0.92172	6.81294	13.41751
34	7.02745	7.75204	8.07197	10.19482	0.81512	0.89714	6.63124	12.94856
35	6.74941	7.48446	7.79334	9.97198	0.79483	0.87481	6.46615	12.51113
36	6.48682	7.23174	7.53020	9.77550	0.77645	0.85458	6.31667	12.10420
37	6.23843	6.99268	7.28127	9.60400	0.75988	0.83635	6.18187	11.72762
38	6.00310	6.76621	7.04545	9.45629	0.74502	0.81999	6.06098	11.38021
39	5.77985	6.55134	6.82172	9.33134	0.73178	0.80542	5.95328	11.06119
40	5.56776	6.34723	6.60918	9.22834	0.72009	0.79255	5.85814	10.76955
41	5.36601	6.15306	6.40700	9.14657	0.70987	0.78130	5.77502	10.50413
42	5.17387	5.96815	6.21445	9.08549	0.70107	0.77162	5.70345	10.26325
43	4.99067	5.79183	6.03086	9.04471	0.69365	0.76345	5.64303	10.04542
44	4.81579	5.62353	5.85562	9.02392	0.68755	0.75673	5.59342	9.84847
45	4.64869	5.46271	5.68816	9.02303	0.68275	0.75145	5.55435	9.67035
46	4.48885	5.30888	5.52798	9.04199	0.67921	0.74756	5.52560	9.50847
47	4.33582	5.16160	5.37462	9.08095	0.67693	0.74504	5.50700	9.35968
48	4.18916	5.02046	5.22765	9.14017	0.67588	0.74389	5.49848	9.22082
49	4.18916	5.02046	5.22765	9.22005	0.67606	0.74409	5.49997	9.22082
50	4.18916	5.02046	5.22765	9.32109	0.67747	0.74565	5.51147	9.22082
51	4.18916	5.02046	5.22765	9.44399	0.68013	0.74857	5.53306	9.22082
52	4.18916	5.02046	5.22765	9.58961	0.68404	0.75287	5.56486	9.22082
53	4.18916	5.02046	5.22765	9.75889	0.68922	0.75857	5.60703	9.22082
54	4.18916	5.02046	5.22765	9.95306	0.69571	0.76572	5.65982	9.22082
55	4.18916	5.02046	5.22765	10.17343	0.70354	0.77433	5.72351	9.22082
56	4.57272	5.42596	5.64989	10.42159	0.71275	0.78447	5.79846	11.44146
57	4.95630	5.83147	6.07213	10.69931	0.72340	0.79619	5.88509	13.66210
58	5.33987	6.23697	6.49437	11.00862	0.73555	0.80956	5.98390	15.88274
59	5.72344	6.64248	6.91662	11.35183	0.74926	0.82465	6.09544	18.10335
60	6.10701	7.04798	7.33886	11.73152	0.76462	0.84156	6.22038	20.32401
61	6.49058	7.45349	7.76110	12.15061	0.78171	0.86037	6.35945	22.54463
62	6.87415	7.85900	8.18334	12.61238	0.80064	0.88121	6.51346	24.76526
63	7.25772	8.26451	8.60558	13.12055	0.82152	0.90419	6.68336	26.98590
64	7.64129	8.67001	9.02783	13.67924	0.84449	0.92947	6.87019	29.20654
65	8.02486	9.07551	9.45006	14.29310	0.86968	0.95719	7.07510	31.42715

Orange 2016 Time Period 4 NOx Emission Rates (grams/mile)

Speed	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3	1.65883	1.67948	1.88477	3.11902	1.84141	2.06717	11.28765	0.90987
4	1.51622	1.53510	1.72273	3.15129	1.76385	1.98011	10.81225	0.87028
5	1.43065	1.44847	1.62551	3.18357	1.69196	1.89941	10.37158	0.83742
6	1.37360	1.39071	1.56070	3.21584	1.62531	1.82458	9.96301	0.81079
7	1.33286	1.34946	1.51440	3.24812	1.56350	1.75520	9.58414	0.78987
8	1.30230	1.31852	1.47968	3.28039	1.50619	1.69085	9.23277	0.77420
9	1.27853	1.29445	1.45267	3.31267	1.45303	1.63118	8.90693	0.76331
10	1.25952	1.27520	1.43107	3.34495	1.40374	1.57584	8.60480	0.75676
11	1.24396	1.25945	1.41339	3.37722	1.35805	1.52455	8.32472	0.75411
12	1.23099	1.24632	1.39866	3.40950	1.31571	1.47703	8.06521	0.75497
13	1.22002	1.23522	1.38620	3.44177	1.27651	1.43302	7.82489	0.75894
14	1.21062	1.22570	1.37552	3.47405	1.24023	1.39229	7.60252	0.76566
15	1.20247	1.21745	1.36626	3.50632	1.20670	1.35465	7.39696	0.77476
16	1.19534	1.21023	1.35816	3.53860	1.17574	1.31989	7.20720	0.78591
17	1.18905	1.20386	1.35101	3.57088	1.14721	1.28786	7.03227	0.79880
18	1.18346	1.19820	1.34465	3.60315	1.12095	1.25839	6.87134	0.81313
19	1.17845	1.19313	1.33897	3.63543	1.09686	1.23134	6.72363	0.82862
20	1.18124	1.18524	1.33011	3.66771	1.07481	1.20658	6.58846	0.84500
21	1.18879	1.18660	1.33164	3.69998	1.05469	1.18400	6.46517	0.86203
22	1.19566	1.18784	1.33303	3.73225	1.03643	1.16350	6.35321	0.87948
23	1.20193	1.18896	1.33429	3.76453	1.01993	1.14497	6.25205	0.89714
24	1.20768	1.19000	1.33545	3.79680	1.00511	1.12834	6.16125	0.91483
25	1.21297	1.19095	1.33652	3.82908	0.99192	1.11354	6.08039	0.93238
26	1.21786	1.19183	1.33751	3.86136	0.98030	1.10048	6.00913	0.94962
27	1.22238	1.19264	1.33842	3.89363	0.97018	1.08913	5.94713	0.96643
28	1.22657	1.19340	1.33927	3.92591	0.96154	1.07943	5.89414	0.98268
29	1.23048	1.19410	1.34006	3.95818	0.95433	1.07133	5.84993	0.99827
30	1.23413	1.19476	1.34079	3.99046	0.94851	1.06481	5.81429	1.01314
31	1.23754	1.19537	1.34148	4.02274	0.94408	1.05982	5.78709	1.02720
32	1.24074	1.19595	1.34213	4.05501	0.94099	1.05636	5.76820	1.04042
33	1.24375	1.19649	1.34274	4.08729	0.93925	1.05441	5.75753	1.05277
34	1.24657	1.19700	1.34331	4.11956	0.93885	1.05396	5.7506	1.06424
35	1.24924	1.19748	1.34385	4.15184	0.93978	1.05500	5.76076	1.07484
36	1.25176	1.19793	1.34436	4.18412	0.94205	1.05755	5.77466	1.08460
37	1.25414	1.19836	1.34484	4.21639	0.94566	1.06160	5.79682	1.09356
38	1.25640	1.19877	1.34529	4.24867	0.95064	1.06719	5.82733	1.10179
39	1.25854	1.19915	1.34573	4.28094	0.95700	1.07434	5.86633	1.10936
40	1.26057	1.19952	1.34614	4.31322	0.96478	1.08306	5.91399	1.11639
41	1.26251	1.19987	1.34653	4.34549	0.97400	1.09341	5.97049	1.12298
42	1.26435	1.20020	1.34690	4.37777	0.98470	1.10543	6.03611	1.12927
43	1.26611	1.20051	1.34725	4.41005	0.99694	1.11916	6.11112	1.13542
44	1.26779	1.20082	1.34759	4.44232	1.01076	1.13468	6.19585	1.14161
45	1.26939	1.20111	1.34792	4.47460	1.02623	1.15205	6.29068	1.14801
46	1.27092	1.20138	1.34823	4.50688	1.04342	1.17134	6.39604	1.15484
47	1.27239	1.20165	1.34852	4.53915	1.06240	1.19265	6.51241	1.16232
48	1.27380	1.20190	1.34881	4.57143	1.08327	1.21608	6.64031	1.17071
49	1.31026	1.24646	1.39881	4.60370	1.10611	1.24172	6.78036	1.20883
50	1.34671	1.29102	1.44882	4.63598	1.13104	1.26971	6.93319	1.24695
51	1.38317	1.33558	1.49883	4.66825	1.15818	1.30018	7.09953	1.28507
52	1.41963	1.38014	1.54884	4.70053	1.18765	1.33327	7.28021	1.32319
53	1.45609	1.42470	1.59885	4.73281	1.21961	1.36914	7.47608	1.36131
54	1.49254	1.46927	1.64886	4.76508	1.25420	1.40797	7.68814	1.39944
55	1.52900	1.51383	1.69886	4.79736	1.29161	1.44997	7.91746	1.43756
56	1.56546	1.55839	1.74887	4.82963	1.33202	1.49534	8.16518	1.47568
57	1.60191	1.60295	1.79888	4.86191	1.37565	1.54432	8.43264	1.51380
58	1.63837	1.64751	1.84889	4.89418	1.42273	1.59717	8.72122	1.55192
59	1.67483	1.69207	1.89890	4.92646	1.47351	1.65417	9.03250	1.59004
60	1.71129	1.73663	1.94890	4.95873	1.52827	1.71565	9.36819	1.62816
61	1.74774	1.78119	1.99891	4.99101	1.58733	1.78194	9.73015	1.66628
62	1.78420	1.82576	2.04892	5.02329	1.65100	1.85342	10.12046	1.70440
63	1.82066	1.87032	2.09893	5.05556	1.71966	1.93050	10.54139	1.74252
64	1.85712	1.91488	2.14894	5.08784	1.79373	2.01366	10.99543	1.78065
65	1.89357	1.95944	2.19894	5.12012	1.87365	2.10337	11.48532	1.81877

1996 JOHRTS Diurnal Rates

Hardin 1996 Diurnal Emission rates in grams

Weighted Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
2.59	4.08	5.79	27.71	0.00	0.00	0.00	11.77

Multiple Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
7.51	9.64	10.84	34.70	0.00	0.00	0.00	0.00

Jefferson 1996 Diurnal Emission rates in grams

Weighted Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
1.77	2.72	5.13	21.55	0.00	0.00	0.00	11.77

Multiple Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
6.98	8.48	10.34	30.32	0.00	0.00	0.00	0.00

Orange 1996 Diurnal Emission rates in grams

Weighted Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
1.70	2.81	5.00	25.74	0.00	0.00	0.00	11.77

Multiple Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
6.90	8.61	10.24	32.97	0.00	0.00	0.00	0.00

1999 JOHRTS Diurnal Rates

Hardin 1999 Diurnal Emission rates in grams

Weighted Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
1.36	2.41	3.40	22.22	0.00	0.00	0.00	11.77

Multiple Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
6.02	7.63	8.16	29.96	0.00	0.00	0.00	0.00

Jefferson 1999 Diurnal Emission rates in grams

Weighted Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
1.49	2.24	3.68	16.92	0.00	0.00	0.00	11.77

Multiple Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
6.25	7.35	8.40	26.18	0.00	0.00	0.00	0.00

Orange 1999 Diurnal Emission rates in grams

Weighted Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
1.35	2.23	3.43	20.62	0.00	0.00	0.00	11.77

Multiple Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
5.94	7.29	8.11	28.74	0.00	0.00	0.00	0.00

2006 JOHRTS Diurnal Rates

Hardin 2006 Diurnal Emission rates in grams

Weighted Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
0.95	1.26	1.28	10.00	0.00	0.00	0.00	11.77

Multiple Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3.86	4.40	4.43	18.43	0.00	0.00	0.00	0.00

Jefferson 2006 Diurnal Emission rates in grams

Weighted Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
0.96	1.26	1.26	9.28	0.00	0.00	0.00	11.77

Multiple Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3.86	4.44	4.40	17.52	0.00	0.00	0.00	0.00

Orange 2006 Diurnal Emission rates in grams

Weighted Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
0.93	1.14	0.95	10.07	0.00	0.00	0.00	11.77

Multiple Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
3.80	4.13	3.65	18.60	0.00	0.00	0.00	0.00

2016 JOHRTS Diurnal Rates

Hardin 2016 Diurnal Emission rates in grams

Weighted Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
0.86	1.10	1.16	7.09	0.00	0.00	0.00	11.77

Multiple Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
2.90	3.33	3.29	13.05	0.00	0.00	0.00	0.00

Jefferson 2016 Diurnal Emission rates in grams

Weighted Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
0.85	1.11	1.13	6.49	0.00	0.00	0.00	11.77

Multiple Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
2.89	3.32	3.23	12.02	0.00	0.00	0.00	0.00

Orange 2016 Diurnal Emission rates in grams

Weighted Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
0.84	1.02	0.97	6.75	0.00	0.00	0.00	11.77

Multiple Diurnal

LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
2.87	3.22	3.08	12.39	0.00	0.00	0.00	0.00

APPENDIX C: SUMALL OUTPUT TABLES

Provided in the Appendix are SUMALL program output tables showing the following for each assignment:

- Vehicle miles of travel cross-classified by vehicle type and roadway type
- Vehicle hours of travel cross-classified by vehicle type and roadway type
- Average operational speeds weighted by VMT cross-classified by vehicle type and roadway type
- Pounds of VOC pollution cross-classified by vehicle type and roadway type for the summer season
- Pounds of CO pollution cross-classified by vehicle type and roadway type for the winter season
- Pounds of NOx pollution cross-classified by vehicle type and roadway type for the winter season

Tables are provided for the following traffic assignments:

- 1996 traffic on the 1993 network (no-build)
- 1996 traffic on the 1996 network (build)
- 1999 traffic on the 1993 network (no-build)
- 1999 traffic on the 1999 network (build)
- 2006 traffic on the 1993 network (no-build)
- 2006 traffic on the 2006 network (build)
- 2016 traffic on the 1993 network (no-build)
- 2016 traffic on the 2016 network (build)

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	529685.29	215465.20	58355.16	33217.55	1795.54	897.77	55661.84	2693.32	897771.67
INTERSTATE HWYS & FW	1685866.91	685776.37	185731.10	105723.86	5714.80	2857.40	177158.90	8572.20	2857401.54
MULTILANE HIGHWAYS	300035.95	122048.52	33054.81	18815.81	1017.07	508.54	31529.20	1525.61	508535.51
PRINCIPAL DIV. ART.	822698.96	334657.20	90636.33	51592.99	2788.81	1394.41	86453.11	4183.22	1394405.01
PRIN. UNDIV. ART.	201158.50	81827.19	22161.53	12615.02	681.89	340.95	21138.69	1022.84	340946.61
MINOR DIV. ART.	94389.05	38395.55	10398.79	5919.31	319.96	159.98	9918.85	479.94	159981.44
MINOR UNDIV. ART.	354654.74	144266.34	39072.13	22241.06	1202.22	601.11	37268.80	1803.33	601109.73
COLLECTORS	291312.35	118499.94	32093.73	18268.74	987.50	493.75	30612.48	1481.25	493749.74
FRONTAGE ROADS	155480.44	63246.28	17129.20	9750.47	527.05	263.53	16338.62	790.58	263526.17
RAMPS	16697.24	6792.10	1839.53	1047.11	56.60	28.30	1754.62	84.90	28300.40
TOTALS	4451979.41	1810974.68	490472.31	279191.93	15091.46	7545.73	467835.12	22637.18	7545727.82

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

VEHICLE HOURS

COUNTY: JEFFERSON

VEHICLE TYPE

ROADWAY TYPE	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	TOTALS
LOCAL	28712.952	11679.845	3163.291	1800.643	97.332	48.666	3017.293	145.998	48666.020
INTERSTATE HWYS & FW	32956.094	13405.869	3630.756	2066.738	111.716	55.858	3463.183	167.573	55857.786
MULTILANE HIGHWAYS	6441.942	2620.451	709.705	403.986	21.837	10.919	676.950	32.756	10918.546
PRINCIPAL DIV. ART.	31553.477	12835.313	3476.231	1978.777	106.961	53.480	3315.789	160.441	53480.470
PRIN. UNDIV. ART.	6909.699	2810.725	761.238	433.320	23.423	11.711	726.104	35.134	11711.354
MINOR DIV. ART.	3733.830	1518.846	411.354	234.155	12.657	6.329	392.369	18.986	6328.526
MINOR UNDIV. ART.	12556.635	5107.784	1383.358	787.450	42.565	21.282	1319.511	63.847	21282.432
COLLECTORS	10744.275	4370.553	1183.691	673.794	36.421	18.211	1129.059	54.632	18210.636
FRONTAGE ROADS	6225.097	2532.243	685.816	390.387	21.102	10.551	654.163	31.653	10551.012
RAMPS	409.195	166.452	45.081	25.661	1.387	0.694	43.000	2.081	693.551
TOTALS	140243.197	57048.080	15450.522	8794.912	475.401	237.700	14737.421	713.101	237700.333

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	19.85	19.85	19.85	19.85	19.85	19.85	19.85	19.85
INTERSTATE HWYS & FW	54.46	54.46	54.46	54.46	54.46	54.46	54.46	54.46
MULTILANE HIGHWAYS	51.63	51.63	51.63	51.63	51.63	51.63	51.63	51.63
PRINCIPAL DIV. ART.	30.56	30.56	30.56	30.56	30.56	30.56	30.56	30.56
PRIN. UNDIV. ART.	31.65	31.65	31.65	31.65	31.65	31.65	31.65	31.65
MINOR DIV. ART.	26.21	26.21	26.21	26.21	26.21	26.21	26.21	26.21
MINOR UNDIV. ART.	31.12	31.12	31.12	31.12	31.12	31.12	31.12	31.12
COLLECTORS	30.02	30.02	30.02	30.02	30.02	30.02	30.02	30.02
FRONTAGE ROADS	29.92	29.92	29.92	29.92	29.92	29.92	29.92	29.92
RAMPS	42.22	42.22	42.22	42.22	42.22	42.22	42.22	42.22

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	2353.0	1047.5	337.7	357.9	3.2	2.2	325.4	35.9	4462.8
INTERSTATE HWYS & FW	3990.8	1946.1	620.1	516.1	4.8	3.3	490.3	94.8	7666.2
MULTILANE HIGHWAYS	784.3	378.9	121.3	98.1	0.9	0.6	94.2	17.6	1496.0
PRINCIPAL DIV. ART.	2763.6	1256.9	402.8	399.0	3.7	2.5	376.9	49.8	5255.2
PRIN. UNDIV. ART.	620.7	283.3	90.4	88.7	0.8	0.6	85.8	11.7	1182.2
MINOR DIV. ART.	326.7	147.4	47.1	47.6	0.4	0.3	46.1	5.7	621.3
MINOR UNDIV. ART.	1124.3	512.3	163.5	162.7	1.5	1.1	157.6	20.9	2143.9
COLLECTORS	950.6	432.2	138.1	138.7	1.3	0.9	133.6	17.4	1812.6
FRONTAGE ROADS	535.8	242.8	78.0	76.9	0.7	0.5	71.2	9.5	1015.3
RAMPS	39.5	18.6	5.9	5.6	0.1	0.0	5.5	0.9	76.1
TOTALS	13489.4	6265.9	2004.9	1891.3	17.4	12.0	1786.6	264.2	25731.6
DIURNAL	658.8	355.4	45.6	117.6	0.0	0.0	0.0	74.2	1251.6
ALL	14148.2	6621.4	2050.4	2008.9	17.4	12.0	1786.6	338.3	26983.2

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	22302.2	10658.8	3403.2	4586.9	7.3	4.1	1610.6	173.2	42746.3
INTERSTATE HWYS & FW	45735.3	24715.3	8010.3	8639.4	11.9	6.7	2607.0	362.1	90088.0
MULTILANE HIGHWAYS	9494.6	5130.5	1667.0	1624.4	2.3	1.3	495.9	77.7	18493.6
PRINCIPAL DIV. ART.	25798.0	12627.5	4022.3	5050.8	8.0	4.5	1761.9	192.1	49465.2
PRIN. UNDIV. ART.	5717.1	2808.1	889.6	1099.5	1.8	1.0	386.4	41.1	10944.6
MINOR DIV. ART.	3070.7	1487.9	468.8	590.5	1.0	0.5	209.7	22.3	5851.4
MINOR UNDIV. ART.	10452.7	5116.3	1614.3	2056.4	3.3	1.9	720.0	75.4	20040.3
COLLECTORS	8866.9	4329.5	1366.5	1750.5	2.8	1.6	614.0	64.4	16996.3
FRONTAGE ROADS	4927.6	2406.0	771.1	954.2	1.5	0.9	332.8	37.2	9431.2
RAMPS	351.4	177.6	56.3	72.1	0.1	0.1	24.5	2.3	684.4
TOTALS	136716.6	69457.6	22269.3	26424.7	39.8	22.6	8762.7	1047.7	264741.1

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1900.6	842.5	256.8	368.9	6.6	3.7	1744.6	4.8	5128.3
INTERSTATE HWYS & FW	8181.9	3725.2	1147.5	1527.1	25.9	14.6	6867.7	25.7	21515.7
MULTILANE HIGHWAYS	1501.3	685.0	211.1	267.5	4.7	2.6	1238.8	4.6	3915.6
PRINCIPAL DIV. ART.	3110.7	1390.2	424.6	627.0	9.5	5.4	2535.2	8.9	8111.6
PRIN. UNDIV. ART.	744.7	332.6	101.5	154.7	2.2	1.3	590.6	2.2	1929.7
MINOR DIV. ART.	341.3	152.0	46.4	69.4	1.1	0.6	280.1	0.9	891.8
MINOR UNDIV. ART.	1326.1	592.4	181.0	271.5	4.1	2.3	1079.2	3.8	3460.3
COLLECTORS	1071.0	477.6	145.8	221.1	3.3	1.9	887.4	3.0	2811.1
FRONTAGE ROADS	574.5	256.3	78.2	117.9	1.7	1.0	463.8	1.7	1495.1
RAMPS	63.0	28.2	8.6	13.9	0.2	0.1	50.0	0.2	164.3
TOTALS	18815.1	8482.0	2601.5	3639.0	59.3	33.4	15737.4	55.9	49423.6

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	198534.94	80759.97	21872.49	12450.50	673.00	336.50	20862.99	1009.50	336499.89
INTERSTATE HWYS & FW	567883.50	231003.46	62563.44	35613.03	1925.03	962.51	59675.89	2887.54	962514.41
MULTILANE HIGHWAYS	109863.09	44690.07	12103.56	6889.72	372.42	186.21	11544.94	558.63	186208.63
PRINCIPAL DIV. ART.	253420.04	103086.12	27919.16	15892.44	859.05	429.53	26630.58	1288.58	429525.50
PRIN. UNDIV. ART.	157087.74	63900.10	17306.28	9851.27	532.50	266.25	16507.53	798.75	266250.41
MINOR DIV. ART.	12308.03	5006.66	1355.97	771.86	41.72	20.86	1293.39	62.58	20861.07
MINOR UNDIV. ART.	219681.69	89362.04	24202.22	13776.65	744.68	372.34	23085.19	1117.03	372341.85
COLLECTORS	56441.12	22959.10	6218.09	3539.53	191.33	95.66	5931.10	286.99	95662.92
FRONTAGE ROADS	55494.86	22574.18	6113.84	3480.19	188.12	94.06	5831.66	282.18	94059.08
RAMPS	8138.67	3310.65	896.63	510.39	27.59	13.79	855.25	41.38	13794.36
TOTALS	1638853.69	666652.35	180551.68	102775.57	5555.44	2777.72	172218.52	8333.15	2777718.12

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

VEHICLE HOURS

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	9047.748	3680.440	996.786	567.401	30.670	15.335	950.780	46.005	15335.166
INTERSTATE HWYS & FW	9262.396	3767.754	1020.433	580.862	31.398	15.699	973.337	47.097	15698.976
MULTILANE HIGHWAYS	2873.204	1168.761	316.539	180.184	9.740	4.870	301.930	14.610	4869.838
PRINCIPAL DIV. ART.	8389.280	3412.588	924.243	526.107	28.438	14.219	881.585	42.657	14219.118
PRIN. UNDIV. ART.	4517.448	1837.606	497.685	283.298	15.313	7.657	474.715	22.970	7656.691
MINOR DIV. ART.	421.380	171.409	46.423	26.426	1.428	0.714	44.281	2.143	714.203
MINOR UNDIV. ART.	6920.896	2815.280	762.472	434.022	23.461	11.730	727.281	35.191	11730.333
COLLECTORS	1814.594	738.140	199.913	113.797	6.151	3.076	190.686	9.227	3075.583
FRONTAGE ROADS	1480.344	602.174	163.089	92.835	5.018	2.509	155.562	7.527	2509.058
RAMPS	186.037	75.676	20.496	11.667	0.631	0.315	19.550	0.946	315.318
TOTALS	44913.327	18269.828	4948.078	2816.598	152.249	76.124	4719.706	228.373	76124.283

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	23.04	23.04	23.04	23.04	23.04	23.04	23.04	23.04
INTERSTATE HWYS & FW	63.08	63.08	63.08	63.08	63.08	63.08	63.08	63.08
MULTILANE HIGHWAYS	42.07	42.07	42.07	42.07	42.07	42.07	42.07	42.07
PRINCIPAL DIV. ART.	33.27	33.27	33.27	33.27	33.27	33.27	33.27	33.27
PRIN. UNDIV. ART.	39.84	39.84	39.84	39.84	39.84	39.84	39.84	39.84
MINOR DIV. ART.	30.31	30.31	30.31	30.31	30.31	30.31	30.31	30.31
MINOR UNDIV. ART.	33.74	33.74	33.74	33.74	33.74	33.74	33.74	33.74
COLLECTORS	32.94	32.94	32.94	32.94	32.94	32.94	32.94	32.94
FRONTAGE ROADS	39.38	39.38	39.38	39.38	39.38	39.38	39.38	39.38
RAMPS	44.76	44.76	44.76	44.76	44.76	44.76	44.76	44.76

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	721.4	342.1	106.0	144.5	1.0	0.7	119.8	12.9	1448.4
INTERSTATE HWYS & FW	1344.4	715.6	221.4	212.6	1.5	1.1	172.6	35.0	2704.2
MULTILANE HIGHWAYS	280.8	140.1	43.1	51.2	0.4	0.3	43.4	6.4	565.7
PRINCIPAL DIV. ART.	711.4	345.1	106.2	138.2	1.0	0.7	116.2	14.8	1433.5
PRIN. UNDIV. ART.	405.9	200.2	61.5	77.4	0.6	0.4	64.6	9.0	819.6
MINOR DIV. ART.	35.7	17.2	5.3	6.9	0.1	0.0	5.9	0.7	71.8
MINOR UNDIV. ART.	597.5	290.3	89.1	116.0	0.9	0.6	99.0	12.7	1206.1
COLLECTORS	155.7	75.5	23.2	30.3	0.2	0.2	25.9	3.3	314.2
FRONTAGE ROADS	134.5	66.3	20.3	25.7	0.2	0.1	21.9	3.1	272.1
RAMPS	17.7	8.9	2.7	3.4	0.0	0.0	2.8	0.4	36.0
TOTALS	4404.9	2201.3	678.8	806.2	5.8	4.1	672.2	98.3	8871.6
DIURNAL	211.2	185.6	20.1	37.2	0.0	0.0	0.0	20.0	474.1
ALL	4616.1	2386.9	698.9	843.3	5.8	4.1	672.2	118.4	9345.7

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	6768.0	3477.0	1060.3	1911.3	2.3	1.3	549.9	54.7	13824.8
INTERSTATE HWYS & FW	18933.3	11520.5	3608.1	4394.0	4.2	2.4	1005.0	180.0	39647.4
MULTILANE HIGHWAYS	2920.8	1631.7	502.6	749.7	0.8	0.5	200.2	24.1	6030.4
PRINCIPAL DIV. ART.	6450.2	3399.0	1039.6	1794.5	2.1	1.2	510.9	49.8	13247.4
PRIN. UNDIV. ART.	3812.1	2058.4	631.5	1073.9	1.2	0.7	294.0	29.8	7901.7
MINOR DIV. ART.	325.7	170.2	51.8	88.8	0.1	0.1	25.6	2.5	664.7
MINOR UNDIV. ART.	5416.5	2858.5	869.0	1514.3	1.8	1.0	430.1	41.2	11132.5
COLLECTORS	1413.1	745.1	226.5	393.7	0.5	0.3	112.2	10.8	2902.1
FRONTAGE ROADS	1222.7	658.2	200.9	344.1	0.4	0.2	95.5	9.1	2531.2
RAMPS	162.5	89.5	27.4	47.3	0.1	0.0	12.7	1.2	340.6
TOTALS	47424.9	26608.2	8217.7	12311.6	13.5	7.8	3235.9	403.2	98222.8

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: ORANGE

COUNTY: GRANGE

	VEHICLE TYPE								
ROADWAY TYPE	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	TOTALS
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
LOCAL	666.1	307.6	93.0	147.2	2.3	1.3	722.5	1.9	1942.0
INTERSTATE HWYS & FW	2992.7	1434.3	438.0	556.9	10.4	5.9	3263.3	10.0	8711.5
MULTILANE HIGHWAYS	443.3	208.9	63.4	94.7	1.4	0.8	447.2	1.4	1261.2
PRINCIPAL DIV. ART.	882.1	410.3	124.0	204.4	2.8	1.6	877.8	2.8	2505.8
PRIN. UNDIV. ART.	599.2	281.0	85.2	133.2	1.9	1.1	599.8	2.0	1703.3
MINOR DIV. ART.	42.1	19.6	5.9	9.7	0.1	0.1	41.7	0.1	119.3
MINOR UNDIV. ART.	769.2	358.0	108.3	177.8	2.4	1.4	765.8	2.4	2185.5
COLLECTORS	195.5	90.9	27.5	45.4	0.6	0.4	195.7	0.6	556.5
FRONTAGE ROADS	203.0	94.9	28.7	46.9	0.6	0.4	198.9	0.7	574.2
RAMPS	30.5	14.3	4.3	7.2	0.1	0.1	30.5	0.1	87.1
TOTALS	6823.8	3219.7	978.4	1423.5	22.7	13.0	7143.2	22.1	19646.3

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	34835.51	20070.79	1730.24	576.75	115.35	115.35	173.02	57.67	57674.68
INTERSTATE HWYS & FW	22639.07	13043.70	1124.46	374.82	74.96	74.96	112.45	37.48	37481.90
MULTILANE HIGHWAYS	26723.74	15397.12	1327.34	442.45	88.49	88.49	132.73	44.24	44244.61
PRINCIPAL DIV. ART.	80021.01	46104.82	3974.55	1324.85	264.97	264.97	397.46	132.49	132485.11
PRIN. UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR DIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COLLECTORS	5952.90	3429.81	295.67	98.56	19.71	19.71	29.57	9.86	9855.79
FRONTAGE ROADS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAMPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	170172.22	98046.25	8452.26	2817.42	563.48	563.48	845.23	281.74	281742.09

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

VEHICLE HOURS

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1221.005	703.493	60.646	20.215	4.043	4.043	6.065	2.022	2021.532
INTERSTATE HWYS & FW	340.731	196.315	16.924	5.641	1.128	1.128	1.692	0.564	564.124
MULTILANE HIGHWAYS	522.944	301.299	25.974	8.658	1.732	1.732	2.597	0.866	865.801
PRINCIPAL DIV. ART.	1576.241	908.165	78.290	26.097	5.219	5.219	7.829	2.610	2609.670
PRIN. UNDIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MINOR DIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MINOR UNDIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLLECTORS	121.640	70.084	6.042	2.014	0.403	0.403	0.604	0.201	201.391
FRONTAGE ROADS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RAMPS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	3782.561	2179.356	187.876	62.625	12.525	12.525	18.788	6.263	6262.518

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	28.72	28.72	28.72	28.72	28.72	28.72	28.72	28.72
INTERSTATE HWYS & FW	66.46	66.46	66.46	66.46	66.46	66.46	66.46	66.46
MULTILANE HIGHWAYS	53.30	53.30	53.30	53.30	53.30	53.30	53.30	53.30
PRINCIPAL DIV. ART.	51.70	51.70	51.70	51.70	51.70	51.70	51.70	51.70
PRIN. UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR DIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COLLECTORS	48.94	48.94	48.94	48.94	48.94	48.94	48.94	48.94
FRONTAGE ROADS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAMPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	120.7	88.4	7.8	5.7	0.1	0.2	0.9	0.7	224.5
INTERSTATE HWYS & FW	67.5	55.4	4.9	2.4	0.1	0.1	0.3	0.5	131.2
MULTILANE HIGHWAYS	72.1	56.8	5.0	3.0	0.1	0.1	0.4	0.5	138.0
PRINCIPAL DIV. ART.	192.6	149.7	13.1	8.8	0.2	0.3	1.3	1.5	367.5
PRIN. UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	13.6	10.6	0.9	0.7	0.0	0.0	0.1	0.1	26.0
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	466.6	360.8	31.8	20.6	0.5	0.7	3.0	3.3	887.2
DIURNAL	129.0	128.5	15.8	23.3	0.0	0.0	0.0	8.7	305.2
ALL	595.6	489.2	47.6	43.8	0.5	0.7	3.0	11.9	1192.5

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1110.0	857.1	75.2	73.4	0.3	0.3	3.6	2.4	2122.3
INTERSTATE HWYS & FW	1088.7	995.4	89.4	56.6	0.2	0.2	2.1	3.1	2235.6
MULTILANE HIGHWAYS	877.0	762.0	67.8	52.7	0.2	0.2	2.2	2.2	1764.1
PRINCIPAL DIV. ART.	1878.0	1558.4	136.9	140.9	0.5	0.6	6.0	4.0	3725.2
PRIN. UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	120.2	98.4	8.6	9.6	0.0	0.0	0.4	0.2	237.5
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	5073.8	4271.2	377.8	333.3	1.2	1.4	14.3	11.9	10084.9

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	121.9	85.8	7.5	7.2	0.4	0.4	5.9	0.1	229.3
INTERSTATE HWYS & FW	133.6	97.5	8.7	6.1	0.5	0.5	7.5	0.1	254.4
MULTILANE HIGHWAYS	126.3	91.0	8.1	6.7	0.4	0.5	6.5	0.1	239.6
PRINCIPAL DIV. ART.	348.8	249.8	22.1	19.7	1.1	1.2	17.4	0.4	660.5
PRIN. UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	22.5	15.9	1.4	1.4	0.1	0.1	1.2	0.0	42.6
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	753.1	540.0	47.7	41.1	2.3	2.7	38.5	0.8	1426.3

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	763055.73	316295.96	81957.89	46244.79	2583.89	1349.62	76697.86	3760.49	1291946.24
INTERSTATE HWYS & FW	2276389.48	929823.53	249418.99	141711.71	7714.80	3894.88	236947.23	11497.23	3857397.85
MULTILANE HIGHWAYS	436622.79	182135.72	46485.71	26147.98	1477.98	783.23	43206.87	2128.48	738988.75
PRINCIPAL DIV. ART.	1156140.01	483848.14	122530.04	68810.28	3912.83	2088.90	113481.15	5604.28	1956415.62
PRIN. UNDIV. ART.	358246.24	145727.28	39467.81	22466.29	1214.39	607.20	37646.22	1821.59	607197.02
MINOR DIV. ART.	106697.08	43402.20	11754.76	6691.17	361.69	180.84	11212.24	542.53	180842.51
MINOR UNDIV. ART.	574336.43	233628.38	63274.35	36017.71	1946.90	973.45	60354.00	2920.35	973451.58
COLLECTORS	353706.37	144888.85	38607.50	21906.83	1198.54	609.12	36573.15	1778.09	599268.45
FRONTAGE ROADS	210975.30	85820.46	23243.04	13230.65	715.17	357.59	22170.29	1072.76	357585.25
RAMPS	24835.91	10102.74	2736.16	1557.51	84.19	42.09	2609.88	126.28	42094.76
TOTALS	6261005.33	2575673.27	679476.25	384784.92	21210.38	10886.93	640898.87	31252.08	10605188.03

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

VEHICLE HOURS

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	38981.705	16063.778	4220.723	2388.259	132.045	68.044	3974.138	194.025	66022.718
INTERSTATE HWYS & FW	42559.221	17369.938	4668.113	2653.241	144.242	72.685	4438.212	215.234	72120.886
MULTILANE HIGHWAYS	9838.090	4090.511	1052.219	592.828	33.308	17.520	981.477	48.231	16654.185
PRINCIPAL DIV. ART.	41518.998	17156.066	4478.763	2530.981	140.619	72.919	4205.203	205.708	70309.258
PRIN. UNDIV. ART.	11427.147	4648.331	1258.923	716.618	38.736	19.368	1200.819	58.104	19368.045
MINOR DIV. ART.	4155.210	1690.255	457.777	260.581	14.085	7.043	436.649	21.128	7042.729
MINOR UNDIV. ART.	19477.531	7923.064	2145.830	1221.472	66.026	33.013	2046.791	99.038	33012.765
COLLECTORS	12680.509	5178.776	1389.646	789.604	42.975	21.689	1320.350	64.060	21487.610
FRONTAGE ROADS	7705.441	3134.417	848.905	483.223	26.120	13.060	809.724	39.180	13060.070
RAMPS	595.232	242.128	65.576	37.328	2.018	1.009	62.550	3.027	1008.868
TOTALS	188939.085	77497.264	20586.476	11674.136	640.174	326.350	19475.914	947.736	320087.135

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	21.09	21.23	20.89	20.82	21.08	21.40	20.74	20.84
INTERSTATE HWYS & FW	56.73	56.77	56.67	56.66	56.73	56.82	56.64	56.66
MULTILANE HIGHWAYS	49.33	49.43	49.19	49.14	49.32	49.55	49.08	49.16
PRINCIPAL DIV. ART.	32.62	33.15	31.86	31.59	32.58	33.80	31.27	31.68
PRIN. UNDIV. ART.	35.24	35.24	35.24	35.24	35.24	35.24	35.24	35.24
MINOR DIV. ART.	26.68	26.68	26.68	26.68	26.68	26.68	26.68	26.68
MINOR UNDIV. ART.	32.12	32.12	32.12	32.12	32.12	32.12	32.12	32.12
COLLECTORS	30.80	30.93	30.63	30.58	30.80	31.09	30.51	30.60
FRONTAGE ROADS	32.41	32.41	32.41	32.41	32.41	32.41	32.41	32.41
RAMPS	43.05	43.05	43.05	43.05	43.05	43.05	43.05	43.05

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	3195.1	1478.0	451.4	508.1	4.4	3.1	446.2	49.5	6135.7
INTERSTATE HWYS & FW	5402.7	2717.1	846.5	731.1	6.3	4.4	663.2	130.2	10501.5
MULTILANE HIGHWAYS	1137.2	575.8	169.4	152.3	1.4	1.0	138.0	24.6	2199.7
PRINCIPAL DIV. ART.	3667.6	1751.7	522.1	546.1	4.9	3.6	494.3	66.0	7056.2
PRIN. UNDIV. ART.	1026.7	483.5	152.0	166.1	1.4	1.0	150.5	20.7	2001.8
MINOR DIV. ART.	362.4	164.5	52.4	54.5	0.5	0.3	52.0	6.5	693.1
MINOR UNDIV. ART.	1721.8	802.5	252.6	278.7	2.4	1.7	256.6	33.6	3349.9
COLLECTORS	1119.9	518.3	162.2	169.6	1.5	1.1	159.5	20.8	2152.9
FRONTAGE ROADS	670.2	309.1	98.3	102.6	0.9	0.6	93.1	12.5	1287.4
RAMPS	57.2	27.5	8.6	9.0	0.1	0.1	8.3	1.3	112.1
TOTALS	18360.8	8828.0	2715.5	2718.0	23.7	16.9	2461.8	365.8	35490.5
DIURNAL	999.0	669.5	81.5	178.0	0.0	0.0	0.0	102.9	2030.9
ALL	19359.9	9497.5	2797.0	2896.0	23.7	16.9	2461.8	468.6	37521.4

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	30180.2	14992.9	4538.6	6571.6	9.9	5.8	2164.1	230.3	58693.4
INTERSTATE HWYS & FW	65757.3	37231.2	11707.8	13090.0	16.2	9.3	3614.0	545.2	131971.1
MULTILANE HIGHWAYS	13292.4	7524.2	2237.3	2426.8	3.3	2.0	698.2	104.0	26288.1
PRINCIPAL DIV. ART.	34126.2	17584.9	5198.8	6986.2	10.6	6.3	2278.8	245.9	66437.8
PRIN. UNDIV. ART.	9529.2	4866.6	1521.1	2173.4	3.0	1.7	680.4	70.9	18846.2
MINOR DIV. ART.	3396.4	1658.1	520.6	679.3	1.1	0.6	235.3	24.8	6516.1
MINOR UNDIV. ART.	15869.3	7974.8	2483.4	3570.7	5.1	2.9	1150.1	116.6	31172.9
COLLECTORS	10400.3	5173.0	1601.5	2153.8	3.3	1.9	726.6	75.4	20135.9
FRONTAGE ROADS	6150.3	3064.2	972.0	1298.3	1.9	1.1	428.2	46.3	11962.3
RAMPS	513.9	267.1	83.7	119.4	0.2	0.1	37.2	3.6	1025.0
TOTALS	189215.3	100337.1	30864.8	39069.6	54.5	31.7	12012.9	1462.9	373048.8

JORTS 1996 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	2688.5	1235.9	357.4	523.3	9.2	5.4	2473.0	6.8	7299.6
INTERSTATE HWYS & FW	11308.2	5257.0	1594.2	2090.2	36.7	21.1	10138.5	35.9	30481.6
MULTILANE HIGHWAYS	2071.0	984.9	282.5	368.9	6.5	3.9	1692.5	6.2	5416.4
PRINCIPAL DIV. ART.	4341.7	2050.3	570.7	851.1	13.4	8.2	3430.4	12.1	11277.9
PRIN. UNDIV. ART.	1343.9	613.6	186.7	287.9	4.1	2.3	1190.4	4.1	3633.0
MINOR DIV. ART.	383.4	171.6	52.3	79.1	1.2	0.7	321.8	1.1	1011.1
MINOR UNDIV. ART.	2095.3	950.4	289.3	449.3	6.5	3.7	1845.0	6.3	5645.8
COLLECTORS	1288.9	584.4	174.7	267.9	4.0	2.3	1084.2	3.7	3410.2
FRONTAGE ROADS	777.5	351.2	106.9	164.8	2.4	1.3	662.8	2.3	2069.3
RAMPS	93.6	42.5	13.0	21.1	0.3	0.2	80.5	0.3	251.4
TOTALS	26392.0	12241.8	3627.6	5103.6	84.3	49.1	22919.0	78.8	70496.3

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	528201.66	214861.69	58191.71	33124.51	1790.51	895.26	55505.94	2685.77	895257.05
INTERSTATE HWYS & FW	1649807.62	671108.18	181758.47	103462.51	5592.57	2796.28	173369.61	8388.85	2796284.10
MULTILANE HIGHWAYS	337019.51	137092.68	37129.27	21135.12	1142.44	571.22	35415.61	1713.66	571219.51
PRINCIPAL DIV. ART.	844279.61	343435.77	93013.86	52946.35	2861.96	1430.98	88720.91	4292.95	1430982.39
PRIN. UNDIV. ART.	189811.55	77211.48	20911.44	11903.44	643.43	321.71	19946.30	965.14	321714.50
MINOR DIV. ART.	89138.83	36259.86	9820.38	5590.06	302.17	151.08	9367.13	453.25	151082.77
MINOR UNDIV. ART.	327465.78	133206.42	36076.74	20535.99	1110.05	555.03	34411.66	1665.08	555026.75
COLLECTORS	290453.47	118150.56	31999.11	18214.88	984.59	492.29	30522.23	1476.88	492294.01
FRONTAGE ROADS	151248.99	61525.01	16663.02	9485.11	512.71	256.35	15893.96	769.06	256354.22
RAMPS	16594.72	6750.39	1828.23	1040.69	56.25	28.13	1743.85	84.38	28126.64
TOTALS	4424021.74	1799602.07	487392.23	277438.65	14996.68	7498.34	464897.20	22495.03	7498341.94

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

VEHICLE HOURS

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	28605.534	11636.149	3151.457	1793.906	96.968	48.484	3006.005	145.452	48483.956
INTERSTATE HWYS & FW	31928.584	12987.899	3517.556	2002.301	108.232	54.116	3355.207	162.349	54116.244
MULTILANE HIGHWAYS	7346.404	2988.368	809.350	460.707	24.903	12.452	771.995	37.355	12451.532
PRINCIPAL DIV. ART.	31582.288	12847.032	3479.405	1980.584	107.059	53.529	3318.817	160.588	53529.302
PRIN. UNDIV. ART.	6561.199	2668.962	722.844	411.465	22.241	11.121	689.482	33.362	11120.676
MINOR DIV. ART.	3545.875	1442.390	390.647	222.368	12.020	6.010	372.617	18.030	6009.957
MINOR UNDIV. ART.	11958.293	4864.390	1317.439	749.927	40.537	20.268	1256.634	60.805	20268.294
COLLECTORS	10540.842	4287.800	1161.279	661.036	35.732	17.866	1107.682	53.597	17865.833
FRONTAGE ROADS	6200.352	2522.177	683.090	388.836	21.018	10.509	651.562	31.527	10509.071
RAMPS	404.590	164.579	44.573	25.373	1.371	0.686	42.516	2.057	685.746
TOTALS	138673.960	56409.747	15277.640	8696.503	470.081	235.041	14572.518	705.122	235040.611

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87
INTERSTATE HWYS & FW	54.98	54.98	54.98	54.98	54.98	54.98	54.98	54.98
MULTILANE HIGHWAYS	51.08	51.08	51.08	51.08	51.08	51.08	51.08	51.08
PRINCIPAL DIV. ART.	30.80	30.80	30.80	30.80	30.80	30.80	30.80	30.80
PRIN. UNDIV. ART.	31.62	31.62	31.62	31.62	31.62	31.62	31.62	31.62
MINOR DIV. ART.	26.03	26.03	26.03	26.03	26.03	26.03	26.03	26.03
MINOR UNDIV. ART.	30.68	30.68	30.68	30.68	30.68	30.68	30.68	30.68
COLLECTORS	30.78	30.78	30.78	30.78	30.78	30.78	30.78	30.78
FRONTAGE ROADS	29.41	29.41	29.41	29.41	29.41	29.41	29.41	29.41
RAMPS	42.24	42.24	42.24	42.24	42.24	42.24	42.24	42.24

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	2344.6	1043.8	336.5	356.6	3.2	2.2	324.3	35.8	4446.9
INTERSTATE HWYS & FW	3917.9	1913.1	610.0	503.3	4.7	3.2	477.7	93.1	7522.9
MULTILANE HIGHWAYS	890.7	429.8	137.6	111.2	1.0	0.7	107.0	19.9	1698.0
PRINCIPAL DIV. ART.	2785.1	1267.8	405.7	402.3	3.7	2.6	382.5	50.7	5300.4
PRIN. UNDIV. ART.	589.5	269.0	85.9	84.2	0.8	0.5	81.3	11.1	1122.3
MINOR DIV. ART.	309.8	139.7	44.7	45.2	0.4	0.3	43.7	5.4	589.3
MINOR UNDIV. ART.	1062.3	483.2	154.4	153.7	1.4	1.0	147.7	19.5	2023.3
COLLECTORS	934.9	425.7	136.0	136.2	1.3	0.9	131.1	17.2	1783.2
FRONTAGE ROADS	530.7	240.2	77.2	76.3	0.7	0.5	70.4	9.3	1005.2
RAMPS	39.2	18.5	5.8	5.6	0.1	0.0	5.4	0.9	75.4
TOTALS	13404.8	6230.7	1993.9	1874.5	17.3	11.9	1771.2	262.9	25567.0
DIURNAL	658.8	355.4	45.6	117.6	0.0	0.0	0.0	74.2	1251.6
ALL	14063.6	6586.1	2039.4	1992.0	17.3	11.9	1771.2	337.0	26818.6

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	22223.4	10621.5	3391.0	4569.6	7.3	4.1	1604.7	172.5	42594.2
INTERSTATE HWYS & FW	45504.4	24652.2	7998.1	8524.2	11.6	6.6	2560.3	362.8	89620.3
MULTILANE HIGHWAYS	10813.0	5840.6	1898.1	1833.6	2.6	1.4	561.0	88.7	21039.0
PRINCIPAL DIV. ART.	25986.6	12727.5	4046.8	5090.6	8.1	4.6	1777.8	191.9	49833.8
PRIN. UNDIV. ART.	5440.0	2672.7	846.9	1045.8	1.7	0.9	367.0	39.3	10414.3
MINOR DIV. ART.	2915.8	1412.3	444.9	560.8	0.9	0.5	199.2	21.2	5555.7
MINOR UNDIV. ART.	9882.1	4832.3	1528.1	1943.1	3.1	1.7	679.2	72.1	18941.8
COLLECTORS	8707.3	4258.2	1344.5	1722.2	2.7	1.6	602.8	63.1	16702.4
FRONTAGE ROADS	4887.4	2384.3	764.9	947.2	1.5	0.9	330.3	37.1	9353.5
RAMPS	348.0	175.9	55.7	71.5	0.1	0.1	24.2	2.3	677.8
TOTALS	136708.0	69577.5	22319.0	26308.8	39.6	22.4	8706.5	1051.0	264732.8

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1895.2	840.1	256.1	367.9	6.5	3.7	1739.0	4.8	5113.4
INTERSTATE HWYS & FW	8097.3	3689.2	1136.7	1499.4	25.6	14.5	6804.6	25.5	21292.8
MULTILANE HIGHWAYS	1680.7	766.7	236.2	299.3	5.2	2.9	1387.8	5.2	4384.1
PRINCIPAL DIV. ART.	3189.5	1425.6	435.4	644.7	9.8	5.5	2590.4	9.2	8310.0
PRIN. UNDIV. ART.	706.3	315.5	96.3	145.9	2.1	1.2	560.8	2.1	1830.2
MINOR DIV. ART.	322.1	143.4	43.8	65.5	1.0	0.6	264.9	0.9	842.1
MINOR UNDIV. ART.	1226.1	547.7	167.3	249.8	3.8	2.1	1000.0	3.5	3200.3
COLLECTORS	1070.0	477.2	145.7	221.8	3.3	1.9	886.3	3.1	2809.4
FRONTAGE ROADS	558.6	249.2	76.0	114.2	1.7	1.0	452.9	1.6	1455.1
RAMPS	62.6	28.0	8.6	13.8	0.2	0.1	49.7	0.2	163.2
TOTALS	18808.4	8482.8	2602.2	3622.3	59.3	33.4	15736.3	55.9	49400.6

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	198508.99	80749.42	21869.63	12448.87	672.91	336.46	20860.27	1009.37	336455.91
INTERSTATE HWYS & FW	566657.49	230504.74	62428.37	35536.15	1920.87	960.44	59547.06	2881.31	960436.42
MULTILANE HIGHWAYS	110238.57	44842.81	12144.93	6913.27	373.69	186.85	11584.39	560.54	186845.03
PRINCIPAL DIV. ART.	257136.26	104597.80	28328.57	16125.49	871.65	435.82	27021.10	1307.47	435824.17
PRIN. UNDIV. ART.	142740.68	58064.00	15725.67	8951.53	483.87	241.93	14999.87	725.80	241933.35
MINOR DIV. ART.	31953.86	12998.18	3520.34	2003.89	108.32	54.16	3357.86	162.48	54159.09
MINOR UNDIV. ART.	217537.44	88489.80	23965.99	13642.18	737.42	368.71	22859.87	1106.12	368707.52
COLLECTORS	55880.85	22731.19	6156.36	3504.39	189.43	94.71	5872.22	284.14	94713.30
FRONTAGE ROADS	56915.55	23152.09	6270.36	3569.28	192.93	96.47	5980.96	289.40	96467.03
RAMPS	8083.38	3288.16	890.54	506.92	27.40	13.70	849.44	41.10	13700.65
TOTALS	1645653.06	669418.19	181300.76	103201.97	5578.48	2789.24	172933.03	8367.73	2789242.47

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

VEHICLE HOURS

COUNTY: ORANGE

VEHICLE TYPE

ROADWAY TYPE	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	TOTALS
LOCAL	9041.826	3678.031	996.133	567.030	30.650	15.325	950.158	45.975	15325.128
INTERSTATE HWYS & FW	9150.453	3722.218	1008.101	573.842	31.018	15.509	961.573	46.528	15509.243
MULTILANE HIGHWAYS	2881.570	1172.164	317.461	180.709	9.768	4.884	302.809	14.652	4884.017
PRINCIPAL DIV. ART.	8623.272	3507.772	950.021	540.781	29.231	14.616	906.174	43.847	14615.715
PRIN. UNDIV. ART.	4201.503	1709.086	462.877	263.484	14.242	7.121	441.514	21.364	7121.192
MINOR DIV. ART.	786.692	320.010	86.669	49.335	2.667	1.333	82.669	4.000	1333.376
MINOR UNDIV. ART.	6884.171	2800.341	758.426	431.719	23.336	11.668	723.421	35.004	11668.086
COLLECTORS	1799.689	732.077	198.271	112.862	6.101	3.050	189.120	9.151	3050.320
FRONTAGE ROADS	1511.796	614.968	166.554	94.808	5.125	2.562	158.867	7.687	2562.366
RAMPS	185.416	75.423	20.427	11.628	0.629	0.314	19.484	0.943	314.264
TOTALS	45066.387	18332.090	4964.941	2826.197	152.767	76.384	4735.790	229.151	76383.708

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
=====	=====	=====	=====	=====	=====	=====	=====	=====
LOCAL	23.05	23.05	23.05	23.05	23.05	23.05	23.05	23.05
INTERSTATE HWYS & FW	63.65	63.65	63.65	63.65	63.65	63.65	63.65	63.65
MULTILANE HIGHWAYS	42.09	42.09	42.09	42.09	42.09	42.09	42.09	42.09
PRINCIPAL DIV. ART.	33.14	33.14	33.14	33.14	33.14	33.14	33.14	33.14
PRIN. UNDIV. ART.	38.84	38.84	38.84	38.84	38.84	38.84	38.84	38.84
MINOR DIV. ART.	44.83	44.83	44.83	44.83	44.83	44.83	44.83	44.83
MINOR UNDIV. ART.	33.60	33.60	33.60	33.60	33.60	33.60	33.60	33.60
COLLECTORS	32.78	32.78	32.78	32.78	32.78	32.78	32.78	32.78
FRONTAGE ROADS	39.59	39.59	39.59	39.59	39.59	39.59	39.59	39.59
RAMPS	44.58	44.58	44.58	44.58	44.58	44.58	44.58	44.58

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	721.0	341.9	105.9	144.4	1.0	0.7	119.8	12.9	1447.6
INTERSTATE HWYS & FW	1345.1	716.6	221.7	211.8	1.5	1.1	172.0	35.0	2704.7
MULTILANE HIGHWAYS	281.7	140.5	43.2	51.4	0.4	0.3	43.5	6.4	567.4
PRINCIPAL DIV. ART.	727.7	352.9	108.7	141.3	1.0	0.7	118.5	15.1	1466.0
PRIN. UNDIV. ART.	374.5	184.2	56.6	71.4	0.5	0.4	59.7	8.2	755.4
MINOR DIV. ART.	74.2	37.1	11.3	14.3	0.1	0.1	12.0	1.8	150.8
MINOR UNDIV. ART.	594.2	288.5	88.6	115.3	0.9	0.6	98.4	12.6	1199.0
COLLECTORS	154.4	74.9	23.0	30.0	0.2	0.2	25.6	3.3	311.5
FRONTAGE ROADS	137.7	68.0	20.8	26.3	0.2	0.1	22.4	3.2	278.6
RAMPS	17.6	8.9	2.7	3.4	0.0	0.0	2.8	0.4	35.9
TOTALS	4428.0	2213.4	682.7	809.6	5.8	4.1	674.7	98.8	8917.1
DIURNAL	211.2	185.6	20.1	37.2	0.0	0.0	0.0	20.0	474.1
ALL	4639.2	2399.0	702.7	846.7	5.8	4.1	674.7	118.9	9391.2

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	6764.4	3475.2	1059.7	1910.0	2.3	1.3	549.5	54.7	13817.1
INTERSTATE HWYS & FW	19067.3	11615.4	3638.8	4403.9	4.2	2.4	1004.9	181.8	39918.6
MULTILANE HIGHWAYS	2929.4	1636.5	504.1	752.1	0.8	0.5	200.8	24.2	6048.3
PRINCIPAL DIV. ART.	6604.5	3479.9	1065.5	1835.5	2.2	1.3	522.5	51.2	13562.5
PRIN. UNDIV. ART.	3506.6	1888.2	579.3	981.3	1.1	0.6	269.9	27.5	7254.7
MINOR DIV. ART.	687.0	373.6	114.0	208.7	0.2	0.1	55.6	5.2	1444.5
MINOR UNDIV. ART.	5389.6	2842.7	864.2	1505.8	1.8	1.0	427.7	41.0	11073.9
COLLECTORS	1401.5	738.7	224.5	389.6	0.5	0.3	111.1	10.7	2876.9
FRONTAGE ROADS	1256.0	677.0	206.7	353.1	0.4	0.2	97.8	9.4	2600.7
RAMPS	162.0	89.3	27.3	46.9	0.1	0.0	12.6	1.2	339.4
TOTALS	47768.3	26816.5	8284.1	12386.9	13.6	7.8	3252.5	406.8	98936.5

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	666.0	307.6	93.0	147.2	2.3	1.3	722.3	1.9	1941.6
INTERSTATE HWYS & FW	2996.5	1436.4	438.7	556.3	10.4	5.9	3274.2	10.0	8728.5
MULTILANE HIGHWAYS	444.9	209.6	63.6	95.1	1.4	0.8	448.8	1.5	1265.6
PRINCIPAL DIV. ART.	895.1	416.2	125.8	207.2	2.8	1.6	891.5	2.8	2543.1
PRIN. UNDIV. ART.	539.0	252.5	76.5	120.2	1.7	1.0	537.9	1.8	1530.6
MINOR DIV. ART.	128.0	60.2	18.3	28.1	0.4	0.2	128.7	0.4	364.3
MINOR UNDIV. ART.	763.3	355.4	107.5	175.9	2.4	1.4	759.0	2.4	2167.3
COLLECTORS	193.4	89.9	27.2	44.9	0.6	0.4	193.3	0.6	550.3
FRONTAGE ROADS	208.9	97.7	29.6	48.2	0.7	0.4	204.9	0.7	591.1
RAMPS	30.2	14.2	4.3	7.1	0.1	0.1	30.2	0.1	86.2
TOTALS	6865.3	3239.8	984.5	1430.1	22.8	13.1	7190.8	22.2	19768.6

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	34835.51	20070.79	1730.24	576.75	115.35	115.35	173.02	57.67	57674.68
INTERSTATE HWYS & FW	22639.07	13043.70	1124.46	374.82	74.96	74.96	112.45	37.48	37481.90
MULTILANE HIGHWAYS	26745.87	15409.87	1328.44	442.81	88.56	88.56	132.84	44.28	44281.25
PRINCIPAL DIV. ART.	80021.01	46104.82	3974.55	1324.85	264.97	264.97	397.46	132.49	132485.11
PRIN. UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR DIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COLLECTORS	5952.90	3429.81	295.67	98.56	19.71	19.71	29.57	9.86	9855.79
FRONTAGE ROADS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAMPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	170194.35	98059.00	8453.36	2817.79	563.56	563.56	845.34	281.78	281778.73

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

VEHICLE HOURS

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1221.005	703.493	60.646	20.215	4.043	4.043	6.065	2.022	2021.532
INTERSTATE HWYS & FW	340.731	196.315	16.924	5.641	1.128	1.128	1.692	0.564	564.124
MULTILANE HIGHWAYS	523.323	301.517	25.993	8.664	1.733	1.733	2.599	0.866	866.429
PRINCIPAL DIV. ART.	1576.241	908.165	78.290	26.097	5.219	5.219	7.829	2.610	2609.670
PRIN. UNDIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MINOR DIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MINOR UNDIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLLECTORS	121.640	70.084	6.042	2.014	0.403	0.403	0.604	0.201	201.391
FRONTAGE ROADS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RAMPS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	3782.940	2179.575	187.894	62.631	12.526	12.526	18.789	6.263	6263.146

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	28.72	28.72	28.72	28.72	28.72	28.72	28.72	28.72
INTERSTATE HWYS & FW	66.46	66.46	66.46	66.46	66.46	66.46	66.46	66.46
MULTILANE HIGHWAYS	53.30	53.30	53.30	53.30	53.30	53.30	53.30	53.30
PRINCIPAL DIV. ART.	51.70	51.70	51.70	51.70	51.70	51.70	51.70	51.70
PRIN. UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR DIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COLLECTORS	48.94	48.94	48.94	48.94	48.94	48.94	48.94	48.94
FRONTAGE ROADS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAMPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	120.7	88.4	7.8	5.7	0.1	0.2	0.9	0.7	224.5
INTERSTATE HWYS & FW	67.5	55.4	4.9	2.4	0.1	0.1	0.3	0.5	131.2
MULTILANE HIGHWAYS	72.1	56.8	5.0	3.0	0.1	0.1	0.4	0.5	138.1
PRINCIPAL DIV. ART.	192.6	149.7	13.1	8.8	0.2	0.3	1.3	1.5	367.5
PRIN. UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	13.6	10.6	0.9	0.7	0.0	0.0	0.1	0.1	26.0
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	466.6	360.8	31.8	20.6	0.5	0.7	3.0	3.3	887.3
DIURNAL	129.0	128.5	15.8	23.3	0.0	0.0	0.0	8.7	305.2
ALL	595.6	489.3	47.6	43.8	0.5	0.7	3.0	11.9	1192.6

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1110.0	857.1	75.2	73.4	0.3	0.3	3.6	2.4	2122.3
INTERSTATE HWYS & FW	1088.7	995.4	89.4	56.6	0.2	0.2	2.1	3.1	2235.6
MULTILANE HIGHWAYS	877.6	762.6	67.8	52.7	0.2	0.2	2.2	2.2	1765.5
PRINCIPAL DIV. ART.	1878.0	1558.4	136.9	140.9	0.5	0.6	6.0	4.0	3725.2
PRIN. UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	120.2	98.4	8.6	9.6	0.0	0.0	0.4	0.2	237.5
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	5074.5	4271.8	377.9	333.3	1.2	1.4	14.3	11.9	10086.2

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	121.9	85.8	7.5	7.2	0.4	0.4	5.9	0.1	229.3
INTERSTATE HWYS & FW	133.6	97.5	8.7	6.1	0.5	0.5	7.5	0.1	254.4
MULTILANE HIGHWAYS	126.5	91.1	8.1	6.7	0.4	0.5	6.5	0.1	239.8
PRINCIPAL DIV. ART.	348.8	249.8	22.1	19.7	1.1	1.2	17.4	0.4	660.5
PRIN. UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	22.5	15.9	1.4	1.4	0.1	0.1	1.2	0.0	42.6
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	753.2	540.1	47.7	41.1	2.3	2.7	38.5	0.8	1426.5

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	761546.15	315681.90	81791.58	46150.13	2578.78	1347.06	76539.23	3752.81	1289387.64
INTERSTATE HWYS & FW	2239104.17	914656.63	245311.29	139373.48	7588.40	3831.68	233029.12	11307.64	3794202.42
MULTILANE HIGHWAYS	474003.95	197345.36	50602.63	28491.20	1604.69	846.63	47132.85	2318.47	802345.79
PRINCIPAL DIV. ART.	1181436.88	494138.39	125316.98	70396.69	3998.58	2131.78	116139.46	5732.90	1999291.67
PRIN. UNDIV. ART.	332552.23	135275.48	36637.11	20854.97	1127.30	563.65	34946.17	1690.94	563647.85
MINOR DIV. ART.	121092.70	49258.05	13340.72	7593.95	410.48	205.24	12725.00	615.73	205241.86
MINOR UNDIV. ART.	545003.22	221696.22	60042.73	34178.17	1847.47	923.73	57271.52	2771.20	923734.27
COLLECTORS	352287.21	144311.57	38451.15	21817.83	1193.73	606.72	36424.02	1770.88	596863.10
FRONTAGE ROADS	208164.54	84677.10	22933.38	13054.39	705.64	352.82	21874.92	1058.46	352821.25
RAMPS	24678.10	10038.55	2718.77	1547.61	83.65	41.83	2593.29	125.48	41827.29
TOTALS	6239869.15	2567079.26	677146.35	383458.41	21138.73	10851.14	638675.57	31144.53	10569363.14

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

VEHICLE HOURS

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	38868.365	16017.673	4208.236	2381.151	131.661	67.852	3962.228	193.449	65830.616
INTERSTATE HWYS & FW	41419.768	16906.432	4542.580	2581.784	140.379	70.754	4318.473	209.441	70189.611
MULTILANE HIGHWAYS	10751.297	4462.049	1152.804	650.080	36.404	19.068	1077.403	52.873	18201.978
PRINCIPAL DIV. ART.	41781.801	17262.969	4507.716	2547.462	141.509	73.364	4232.820	207.045	70754.687
PRIN. UNDIV. ART.	10762.702	4378.048	1185.721	674.949	36.484	18.242	1130.996	54.726	18241.868
MINOR DIV. ART.	4332.567	1762.400	477.317	271.703	14.687	7.343	455.287	22.030	7343.333
MINOR UNDIV. ART.	18842.464	7664.731	2075.865	1181.646	63.873	31.936	1980.056	95.809	31936.379
COLLECTORS	12462.170	5089.961	1365.592	775.912	42.235	21.319	1297.406	62.950	21117.544
FRONTAGE ROADS	7712.148	3137.145	849.643	483.643	26.143	13.071	810.429	39.214	13071.437
RAMPS	590.006	240.002	65.001	37.000	2.000	1.000	62.001	3.000	1000.010
TOTALS	187523.288	76921.411	20430.475	11585.331	635.375	323.951	19327.097	940.536	317687.465

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	21.10	21.24	20.91	20.84	21.09	21.42	20.75	20.86
INTERSTATE HWYS & FW	57.29	57.33	57.24	57.22	57.29	57.38	57.20	57.23
MULTILANE HIGHWAYS	49.12	49.21	48.98	48.93	49.11	49.33	48.88	48.95
PRINCIPAL DIV. ART.	32.72	33.24	31.99	31.73	32.69	33.88	31.41	31.82
PRIN. UNDIV. ART.	34.72	34.72	34.72	34.72	34.72	34.72	34.72	34.72
MINOR DIV. ART.	30.99	30.99	30.99	30.99	30.99	30.99	30.99	30.99
MINOR UNDIV. ART.	31.84	31.84	31.84	31.84	31.84	31.84	31.84	31.84
COLLECTORS	31.40	31.53	31.24	31.18	31.40	31.68	31.12	31.20
FRONTAGE ROADS	32.19	32.19	32.19	32.19	32.19	32.19	32.19	32.19
RAMPS	43.01	43.01	43.01	43.01	43.01	43.01	43.01	43.01

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	3186.3	1474.1	450.2	506.7	4.3	3.1	445.0	49.4	6119.1
INTERSTATE HWYS & FW	5330.6	2685.0	836.6	717.5	6.2	4.4	650.0	128.6	10358.8
MULTILANE HIGHWAYS	1244.6	627.1	185.9	165.6	1.5	1.1	150.9	26.8	2403.5
PRINCIPAL DIV. ART.	3705.5	1770.4	527.6	552.4	5.0	3.6	502.3	67.2	7133.9
PRIN. UNDIV. ART.	963.9	453.1	142.5	155.5	1.3	0.9	141.0	19.3	1877.7
MINOR DIV. ART.	384.1	176.8	56.0	59.5	0.5	0.4	55.7	7.2	740.2
MINOR UNDIV. ART.	1656.5	771.7	243.0	269.0	2.3	1.6	246.1	32.1	3222.3
COLLECTORS	1102.9	511.2	159.9	166.9	1.5	1.1	156.8	20.6	2120.8
FRONTAGE ROADS	668.4	308.2	98.1	102.6	0.9	0.6	92.8	12.4	1283.9
RAMPS	56.8	27.3	8.5	8.9	0.1	0.1	8.3	1.3	111.3
TOTALS	18299.4	8804.8	2708.3	2704.6	23.6	16.8	2448.9	365.0	35371.4
DIURNAL	999.0	669.5	81.5	178.0	0.0	0.0	0.0	102.9	2030.9
ALL	19298.5	9474.4	2789.8	2882.6	23.6	16.8	2448.9	467.9	37402.4

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	30097.8	14953.8	4525.9	6553.1	9.9	5.8	2157.7	229.6	58533.6
INTERSTATE HWYS & FW	65660.4	37263.1	11726.3	12984.8	16.0	9.2	3567.2	547.7	131774.6
MULTILANE HIGHWAYS	14620.0	8239.7	2470.0	2638.4	3.6	2.1	763.9	115.0	28852.8
PRINCIPAL DIV. ART.	34469.1	17765.7	5249.1	7067.0	10.8	6.4	2306.3	247.1	67121.5
PRIN. UNDIV. ART.	8946.6	4560.9	1426.2	2027.1	2.8	1.6	637.0	66.7	17668.9
MINOR DIV. ART.	3602.8	1785.8	558.9	769.6	1.1	0.6	254.9	26.4	7000.1
MINOR UNDIV. ART.	15271.7	7675.0	2392.4	3448.9	4.9	2.8	1107.0	113.1	30015.7
COLLECTORS	10229.0	5095.2	1577.6	2121.5	3.2	1.9	714.3	74.1	19816.8
FRONTAGE ROADS	6143.3	3061.4	971.6	1300.3	1.9	1.1	428.1	46.5	11954.2
RAMPS	510.0	265.2	83.0	118.4	0.2	0.1	36.9	3.5	1017.2
TOTALS	189550.8	100665.8	30980.9	39029.0	54.3	31.6	11973.3	1469.7	373755.5

JORTS 1996 TRIPS ON 1996 NETWORK
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: ALL COUNTIES

	VEHICLE TYPE								
ROADWAY TYPE	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	TOTALS
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
LOCAL	2683.1	1233.5	356.7	522.3	9.2	5.4	2467.3	6.8	7284.2
INTERSTATE HWYS & FW	11227.4	5223.1	1584.0	2061.8	36.5	20.9	10086.3	35.6	30275.7
MULTILANE HIGHWAYS	2252.0	1067.4	307.9	401.0	7.0	4.2	1843.1	6.8	5889.5
PRINCIPAL DIV. ART.	4433.4	2091.7	583.3	871.6	13.6	8.4	3499.3	12.4	11513.6
PRIN. UNDIV. ART.	1245.3	568.1	172.9	266.1	3.8	2.2	1098.7	3.8	3360.8
MINOR DIV. ART.	450.0	203.7	62.1	93.6	1.4	0.8	393.6	1.3	1206.5
MINOR UNDIV. ART.	1989.5	903.0	274.8	425.7	6.2	3.5	1759.0	5.9	5367.6
COLLECTORS	1285.9	583.1	174.3	268.1	4.0	2.3	1080.8	3.7	3402.2
FRONTAGE ROADS	767.6	346.9	105.6	162.4	2.4	1.3	657.7	2.3	2046.2
RAMPS	92.9	42.2	12.9	20.9	0.3	0.2	79.8	0.3	249.4
TOTALS	26427.0	12262.6	3634.4	5093.5	84.4	49.2	22965.6	78.9	70595.8

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	539440.33	219433.36	59429.87	33829.31	1828.61	914.31	56686.95	2742.92	914305.65
INTERSTATE HWYS & FW	1706878.21	694323.34	188045.90	107041.52	5786.03	2893.01	179366.86	8679.04	2893013.92
MULTILANE HIGHWAYS	309365.47	125843.58	34082.64	19400.89	1048.70	524.35	32509.59	1573.04	524348.25
PRINCIPAL DIV. ART.	837339.74	340612.78	92249.29	52511.14	2838.44	1419.22	87991.63	4257.66	1419219.90
PRIN. UNDIV. ART.	204678.33	83258.98	22549.31	12835.76	693.82	346.91	21508.57	1040.74	346912.43
MINOR DIV. ART.	97014.90	39463.69	10688.08	6083.99	328.86	164.43	10194.79	493.30	164432.03
MINOR UNDIV. ART.	366191.13	148959.10	40343.09	22964.53	1241.33	620.66	38481.10	1861.99	620662.93
COLLECTORS	302651.40	123112.44	33342.95	18979.83	1025.94	512.97	31804.05	1538.91	512968.48
FRONTAGE ROADS	165251.01	67220.75	18205.62	10363.20	560.17	280.09	17365.36	840.26	280086.45
RAMPS	16825.14	6844.12	1853.62	1055.14	57.03	28.52	1768.07	85.55	28517.18
TOTALS	4545635.66	1849072.13	500790.37	285065.29	15408.93	7704.47	477676.97	23113.40	7704467.22

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

VEHICLE HOURS

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	29240.971	11894.632	3221.463	1833.756	99.122	49.561	3072.780	148.683	49560.967
INTERSTATE HWYS & FW	33440.681	13602.989	3684.143	2097.127	113.358	56.679	3514.105	170.037	56679.120
MULTILANE HIGHWAYS	6645.412	2703.218	732.122	416.746	22.527	11.263	698.331	33.790	11263.410
PRINCIPAL DIV. ART.	32382.186	13172.415	3567.529	2030.747	109.770	54.885	3402.874	164.655	54885.061
PRIN. UNDIV. ART.	7017.446	2854.554	773.109	440.077	23.788	11.894	737.427	35.682	11893.977
MINOR DIV. ART.	3846.308	1564.600	423.746	241.209	13.038	6.519	404.188	19.557	6519.166
MINOR UNDIV. ART.	13171.788	5358.016	1451.129	826.027	44.650	22.325	1384.154	66.975	22325.065
COLLECTORS	11178.573	4547.216	1231.538	701.029	37.893	18.947	1174.698	56.840	18946.734
FRONTAGE ROADS	6573.466	2673.952	724.195	412.234	22.283	11.141	690.771	33.424	11141.468
RAMPS	412.489	167.792	45.444	25.868	1.398	0.699	43.346	2.097	699.135
TOTALS	143909.321	58539.385	15854.417	9024.822	487.828	243.914	15122.674	731.742	243914.103

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	19.85	19.85	19.85	19.85	19.85	19.85	19.85	19.85
INTERSTATE HWYS & FW	54.40	54.40	54.40	54.40	54.40	54.40	54.40	54.40
MULTILANE HIGHWAYS	51.60	51.60	51.60	51.60	51.60	51.60	51.60	51.60
PRINCIPAL DIV. ART.	30.46	30.46	30.46	30.46	30.46	30.46	30.46	30.46
PRIN. UNDIV. ART.	31.65	31.65	31.65	31.65	31.65	31.65	31.65	31.65
MINOR DIV. ART.	26.15	26.15	26.15	26.15	26.15	26.15	26.15	26.15
MINOR UNDIV. ART.	30.75	30.75	30.75	30.75	30.75	30.75	30.75	30.75
COLLECTORS	30.02	30.02	30.02	30.02	30.02	30.02	30.02	30.02
FRONTAGE ROADS	29.97	29.97	29.97	29.97	29.97	29.97	29.97	29.97
RAMPS	42.26	42.26	42.26	42.26	42.26	42.26	42.26	42.26

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	2172.1	931.5	293.5	276.3	2.9	1.9	304.1	36.2	4018.5
INTERSTATE HWYS & FW	3574.7	1674.3	522.1	393.7	4.4	2.8	455.9	95.7	6723.6
MULTILANE HIGHWAYS	714.2	330.8	103.6	76.2	0.9	0.6	89.1	18.1	1333.3
PRINCIPAL DIV. ART.	2555.8	1119.7	350.9	309.2	3.4	2.2	353.5	50.5	4745.1
PRIN. UNDIV. ART.	570.6	250.9	78.3	68.2	0.8	0.5	80.1	11.9	1061.1
MINOR DIV. ART.	306.0	132.7	41.5	37.1	0.4	0.3	43.5	5.9	567.4
MINOR UNDIV. ART.	1065.4	466.5	145.7	128.7	1.4	0.9	150.9	21.6	1981.2
COLLECTORS	897.2	392.3	122.6	109.1	1.2	0.8	127.5	18.0	1668.6
FRONTAGE ROADS	510.9	223.5	70.1	61.5	0.7	0.4	69.2	10.0	946.3
RAMPS	35.8	16.3	5.0	4.3	0.0	0.0	5.0	0.9	67.4
TOTALS	12402.7	5538.5	1733.4	1464.0	16.1	10.5	1678.9	268.6	23112.6
DIURNAL	565.9	290.0	32.1	95.5	0.0	0.0	0.0	77.6	1061.1
ALL	12968.6	5828.5	1765.5	1559.5	16.1	10.5	1678.9	346.2	24173.7

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	19932.6	9286.9	2927.6	3196.8	7.1	3.9	1559.5	177.0	37091.3
INTERSTATE HWYS & FW	34774.1	18774.9	6070.8	5988.8	11.4	6.2	2511.4	367.5	68505.1
MULTILANE HIGHWAYS	7402.6	3967.7	1284.5	1144.4	2.2	1.2	485.6	80.0	14368.2
PRINCIPAL DIV. ART.	22450.1	10789.9	3406.1	3542.5	7.8	4.2	1715.8	197.9	42114.2
PRIN. UNDIV. ART.	4922.2	2382.1	748.7	764.7	1.7	0.9	373.3	41.9	9235.6
MINOR DIV. ART.	2755.9	1307.1	408.3	416.3	0.9	0.5	205.4	23.1	5117.5
MINOR UNDIV. ART.	9369.1	4500.9	1409.8	1471.3	3.2	1.8	715.9	79.4	17551.5
COLLECTORS	7931.9	3800.9	1190.0	1247.1	2.7	1.5	607.6	67.2	14849.0
FRONTAGE ROADS	4404.1	2115.7	670.9	690.1	1.5	0.8	334.6	39.4	8257.2
RAMPS	283.9	143.8	45.4	49.7	0.1	0.1	23.4	2.4	548.8
TOTALS	114226.5	57070.0	18162.1	18511.7	38.6	21.1	8532.5	1075.8	217638.4

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1878.2	794.7	248.8	343.5	6.0	3.2	1433.6	4.9	4712.9
INTERSTATE HWYS & FW	7862.5	3389.2	1069.7	1413.3	23.4	12.7	5606.8	26.0	19403.7
MULTILANE HIGHWAYS	1464.9	634.6	200.3	252.1	4.3	2.3	1028.6	4.8	3592.0
PRINCIPAL DIV. ART.	3065.0	1294.4	406.0	583.1	8.7	4.7	2085.4	9.1	7456.4
PRIN. UNDIV. ART.	735.2	309.3	97.0	143.9	2.0	1.1	484.8	2.2	1775.5
MINOR DIV. ART.	340.5	143.6	45.0	65.2	1.0	0.5	232.4	1.0	829.2
MINOR UNDIV. ART.	1324.2	558.7	175.3	255.6	3.8	2.0	899.7	3.9	3223.2
COLLECTORS	1078.7	454.5	142.5	210.0	3.1	1.7	744.6	3.2	2638.3
FRONTAGE ROADS	592.7	249.3	78.1	114.6	1.7	0.9	397.1	1.8	1436.2
RAMPS	61.6	25.8	8.1	12.8	0.2	0.1	40.7	0.2	149.4
TOTALS	18403.5	7854.0	2471.0	3394.2	54.1	29.3	12953.8	57.0	45216.9

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	197425.42	80308.65	21750.26	12380.92	669.24	334.62	20746.40	1003.86	334619.36
INTERSTATE HWYS & FW	562713.63	228900.46	61993.87	35288.82	1907.50	953.75	59132.62	2861.26	953751.92
MULTILANE HIGHWAYS	108655.27	44198.75	11970.50	6813.97	368.32	184.16	11418.01	552.48	184161.47
PRINCIPAL DIV. ART.	252739.66	102809.35	27844.20	15849.78	856.74	428.37	26559.08	1285.12	428372.31
PRIN. UNDIV. ART.	155709.96	63339.65	17154.49	9764.86	527.83	263.92	16362.74	791.75	263915.19
MINOR DIV. ART.	12418.82	5051.72	1368.17	778.81	42.10	21.05	1305.03	63.15	21048.84
MINOR UNDIV. ART.	219960.28	89475.37	24232.91	13794.12	745.63	372.81	23114.47	1118.44	372814.04
COLLECTORS	57539.10	23405.73	6339.05	3608.38	195.05	97.52	6046.48	292.57	97523.89
FRONTAGE ROADS	56456.55	22965.37	6219.79	3540.50	191.38	95.69	5932.72	287.07	95689.06
RAMPS	7866.38	3199.88	866.64	493.32	26.67	13.33	826.64	40.00	13332.85
TOTALS	1631485.07	663654.94	179739.88	102313.47	5530.46	2765.23	171444.19	8295.69	2765228.93

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

VEHICLE HOURS

COUNTY: ORANGE

	VEHICLE TYPE								
ROADWAY TYPE	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	TOTALS
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
LOCAL	9005.203	3663.133	992.099	564.733	30.526	15.263	946.309	45.789	15263.055
INTERSTATE HWYS & FW	9139.880	3717.917	1006.936	573.179	30.983	15.491	960.462	46.474	15491.322
MULTILANE HIGHWAYS	2840.810	1155.584	312.971	178.153	9.630	4.815	298.526	14.445	4814.933
PRINCIPAL DIV. ART.	8344.749	3394.474	919.337	523.315	28.287	14.144	876.906	42.431	14143.642
PRIN. UNDIV. ART.	4458.524	1813.637	491.193	279.602	15.114	7.557	468.523	22.670	7556.820
MINOR DIV. ART.	424.994	172.879	46.821	26.652	1.441	0.720	44.660	2.161	720.329
MINOR UNDIV. ART.	6928.320	2818.300	763.290	434.488	23.486	11.743	728.061	35.229	11742.915
COLLECTORS	1841.122	748.931	202.835	115.460	6.241	3.121	193.474	9.362	3120.546
FRONTAGE ROADS	1504.565	612.027	165.757	94.354	5.100	2.550	158.107	7.650	2550.111
RAMPS	179.438	72.992	19.769	11.253	0.608	0.304	18.856	0.912	304.132
TOTALS	44667.605	18169.873	4921.007	2801.189	151.416	75.708	4693.884	227.123	75707.804

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	23.04	23.04	23.04	23.04	23.04	23.04	23.04	23.04
INTERSTATE HWYS & FW	63.18	63.18	63.18	63.18	63.18	63.18	63.18	63.18
MULTILANE HIGHWAYS	42.07	42.07	42.07	42.07	42.07	42.07	42.07	42.07
PRINCIPAL DIV. ART.	33.29	33.29	33.29	33.29	33.29	33.29	33.29	33.29
PRIN. UNDIV. ART.	39.90	39.90	39.90	39.90	39.90	39.90	39.90	39.90
MINOR DIV. ART.	30.32	30.32	30.32	30.32	30.32	30.32	30.32	30.32
MINOR UNDIV. ART.	33.75	33.75	33.75	33.75	33.75	33.75	33.75	33.75
COLLECTORS	33.15	33.15	33.15	33.15	33.15	33.15	33.15	33.15
FRONTAGE ROADS	39.38	39.38	39.38	39.38	39.38	39.38	39.38	39.38
RAMPS	44.78	44.78	44.78	44.78	44.78	44.78	44.78	44.78

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	604.0	286.8	87.2	105.5	0.9	0.6	107.3	12.8	1205.1
INTERSTATE HWYS & FW	1067.8	567.8	172.2	153.4	1.3	0.9	153.7	34.6	2151.7
MULTILANE HIGHWAYS	229.5	114.7	34.6	37.1	0.3	0.2	38.6	6.4	461.4
PRINCIPAL DIV. ART.	591.2	288.1	87.1	100.9	0.9	0.6	104.2	14.8	1187.7
PRIN. UNDIV. ART.	333.3	165.2	49.8	56.0	0.5	0.3	57.5	9.0	671.6
MINOR DIV. ART.	30.2	14.6	4.4	5.1	0.0	0.0	5.4	0.7	60.5
MINOR UNDIV. ART.	500.4	243.9	73.6	85.1	0.7	0.5	89.2	12.7	1006.2
COLLECTORS	132.3	64.4	19.4	22.5	0.2	0.1	23.6	3.3	266.0
FRONTAGE ROADS	113.7	56.4	17.0	19.1	0.2	0.1	20.0	3.2	229.6
RAMPS	14.1	7.1	2.1	2.4	0.0	0.0	2.5	0.4	28.7
TOTALS	3616.6	1809.0	547.5	587.1	4.9	3.4	602.1	97.9	7268.6
DIURNAL	173.9	160.4	15.4	31.4	0.0	0.0	0.0	19.3	400.5
ALL	3790.5	1969.4	562.9	618.5	4.9	3.4	602.1	117.3	7669.1

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	5555.2	2870.8	872.2	1285.9	2.1	1.2	513.6	54.8	11155.8
INTERSTATE HWYS & FW	12513.3	7951.1	2481.1	2942.5	3.8	2.2	933.6	179.8	27007.3
MULTILANE HIGHWAYS	2136.6	1225.3	376.0	501.2	0.8	0.4	185.7	24.0	4450.0
PRINCIPAL DIV. ART.	5045.0	2717.3	828.1	1207.9	2.0	1.1	477.4	49.8	10328.5
PRIN. UNDIV. ART.	2873.9	1594.5	487.4	718.0	1.1	0.6	272.8	29.7	5978.1
MINOR DIV. ART.	262.9	139.8	42.4	60.5	0.1	0.1	24.2	2.5	532.6
MINOR UNDIV. ART.	4280.5	2307.7	700.2	1024.8	1.7	0.9	404.1	41.5	8761.4
COLLECTORS	1134.6	610.9	185.3	270.7	0.4	0.2	107.0	11.0	2320.1
FRONTAGE ROADS	945.3	525.3	160.0	236.2	0.4	0.2	91.0	9.3	1967.9
RAMPS	114.9	66.1	20.2	30.8	0.0	0.0	11.5	1.2	244.7
TOTALS	34862.1	20008.8	6152.9	8278.5	12.4	7.0	3020.9	403.7	72746.3

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	593.7	274.6	85.5	132.9	2.0	1.1	581.3	1.9	1673.0
INTERSTATE HWYS & FW	2571.5	1238.5	387.7	501.5	8.8	5.0	2618.2	9.9	7341.0
MULTILANE HIGHWAYS	387.6	181.7	56.7	85.1	1.2	0.7	357.8	1.4	1072.2
PRINCIPAL DIV. ART.	787.8	362.9	113.0	185.1	2.4	1.3	707.8	2.8	2163.2
PRIN. UNDIV. ART.	527.7	245.7	76.6	120.0	1.6	0.9	480.9	1.9	1455.3
MINOR DIV. ART.	38.1	17.6	5.5	8.9	0.1	0.1	34.0	0.1	104.3
MINOR UNDIV. ART.	689.2	317.9	99.0	161.7	2.1	1.2	620.2	2.5	1893.7
COLLECTORS	178.6	82.3	25.6	42.1	0.5	0.3	161.6	0.6	491.7
FRONTAGE ROADS	184.0	85.1	26.5	43.3	0.6	0.3	163.5	0.7	504.0
RAMPS	26.2	12.1	3.8	6.3	0.1	0.0	23.8	0.1	72.4
TOTALS	5984.3	2818.4	879.8	1286.9	19.4	10.9	5749.2	22.0	16770.8

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	34911.00	20114.29	1733.99	578.00	115.60	115.60	173.40	57.80	57799.67
INTERSTATE HWYS & FW	22866.64	13174.82	1135.76	378.59	75.72	75.72	113.58	37.86	37858.67
MULTILANE HIGHWAYS	26960.93	15533.78	1339.12	446.37	89.27	89.27	133.91	44.64	44637.30
PRINCIPAL DIV. ART.	80740.03	46519.09	4010.27	1336.76	267.35	267.35	401.03	133.68	133675.55
PRIN. UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR DIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COLLECTORS	6013.00	3464.44	298.66	99.55	19.91	19.91	29.87	9.96	9955.30
FRONTAGE ROADS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAMPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	171491.60	98806.42	8517.79	2839.26	567.85	567.85	851.78	283.93	283926.49

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

VEHICLE HOURS

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1223.384	704.863	60.764	20.255	4.051	4.051	6.076	2.025	2025.470
INTERSTATE HWYS & FW	344.235	198.334	17.098	5.699	1.140	1.140	1.710	0.570	569.926
MULTILANE HIGHWAYS	527.684	304.030	26.209	8.736	1.747	1.747	2.621	0.874	873.649
PRINCIPAL DIV. ART.	1592.329	917.435	79.089	26.363	5.273	5.273	7.909	2.636	2636.307
PRIN. UNDIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MINOR DIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MINOR UNDIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLLECTORS	122.881	70.799	6.103	2.034	0.407	0.407	0.610	0.203	203.445
FRONTAGE ROADS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RAMPS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	3810.513	2195.461	189.264	63.088	12.618	12.618	18.926	6.309	6308.796

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	28.73	28.73	28.73	28.73	28.73	28.73	28.73	28.73
INTERSTATE HWYS & FW	66.44	66.44	66.44	66.44	66.44	66.44	66.44	66.44
MULTILANE HIGHWAYS	53.29	53.29	53.29	53.29	53.29	53.29	53.29	53.29
PRINCIPAL DIV. ART.	51.65	51.65	51.65	51.65	51.65	51.65	51.65	51.65
PRIN. UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR DIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COLLECTORS	48.94	48.94	48.94	48.94	48.94	48.94	48.94	48.94
FRONTAGE ROADS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAMPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	90.5	67.9	5.8	4.2	0.1	0.2	0.8	0.7	170.2
INTERSTATE HWYS & FW	48.3	40.6	3.4	1.8	0.0	0.1	0.3	0.5	95.0
MULTILANE HIGHWAYS	52.6	42.7	3.6	2.2	0.1	0.1	0.4	0.6	102.3
PRINCIPAL DIV. ART.	142.1	114.4	9.6	6.6	0.2	0.3	1.2	1.5	276.0
PRIN. UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	10.1	8.1	0.7	0.5	0.0	0.0	0.1	0.1	19.6
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	343.6	273.7	23.0	15.4	0.4	0.6	2.8	3.4	663.0
DIURNAL	78.5	83.8	10.0	18.1	0.0	0.0	0.0	7.4	197.7
ALL	422.0	357.6	33.0	33.5	0.4	0.6	2.8	10.8	860.8

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	788.3	647.6	55.5	49.2	0.3	0.3	3.4	2.5	1546.9
INTERSTATE HWYS & FW	632.3	644.4	55.3	38.2	0.2	0.2	2.0	3.2	1375.6
MULTILANE HIGHWAYS	534.8	514.3	44.0	35.5	0.2	0.2	2.1	2.2	1133.2
PRINCIPAL DIV. ART.	1184.8	1093.7	92.9	94.9	0.5	0.5	5.8	4.1	2477.3
PRIN. UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	76.4	70.0	5.9	6.5	0.0	0.0	0.4	0.2	159.5
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	3216.5	2969.9	253.5	224.2	1.1	1.3	13.7	12.3	6692.5

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	112.2	80.7	7.0	6.6	0.3	0.4	5.0	0.1	212.4
INTERSTATE HWYS & FW	119.2	90.6	7.9	5.6	0.4	0.5	6.4	0.1	230.8
MULTILANE HIGHWAYS	114.3	84.8	7.4	6.2	0.3	0.4	5.6	0.1	219.1
PRINCIPAL DIV. ART.	317.1	232.8	20.3	18.2	0.9	1.1	14.9	0.4	605.8
PRIN. UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	20.7	14.9	1.3	1.3	0.1	0.1	1.0	0.0	39.4
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	683.5	503.8	44.0	38.0	2.0	2.4	32.9	0.8	1307.5

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	771776.76	319856.29	82914.12	46788.22	2613.45	1364.52	77606.75	3804.57	1306724.68
INTERSTATE HWYS & FW	2292458.48	936398.62	251175.54	142708.92	7769.25	3922.48	238613.06	11578.16	3884624.51
MULTILANE HIGHWAYS	444981.66	185576.11	47392.25	26661.23	1506.29	797.78	44061.51	2170.17	753147.02
PRINCIPAL DIV. ART.	1170819.44	489941.22	124103.76	69697.67	3962.54	2114.94	114951.74	5676.45	1981267.76
PRIN. UNDIV. ART.	360388.30	146598.63	39703.80	22600.62	1221.66	610.83	37871.31	1832.48	610827.62
MINOR DIV. ART.	109433.71	44515.41	12056.26	6862.79	370.96	185.48	11499.81	556.44	185480.87
MINOR UNDIV. ART.	586151.41	238434.47	64576.00	36758.65	1986.95	993.48	61595.57	2980.43	993476.97
COLLECTORS	366203.50	149982.61	39980.66	22687.77	1240.90	630.40	37880.39	1841.43	620447.67
FRONTAGE ROADS	221707.55	90186.12	24425.41	13903.69	751.55	375.78	23298.08	1127.33	375775.51
RAMPS	24691.52	10044.01	2720.25	1548.45	83.70	41.85	2594.70	125.55	41850.03
TOTALS	6348612.33	2611533.49	689048.04	390218.02	21507.25	11037.55	649972.94	31693.01	10753622.64

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

VEHICLE HOURS

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	39469.557	16262.629	4274.326	2418.744	133.699	68.875	4025.166	196.498	66849.492
INTERSTATE HWYS & FW	42924.796	17519.240	4708.177	2676.006	145.481	73.310	4476.277	217.081	72740.368
MULTILANE HIGHWAYS	10013.907	4162.832	1071.302	603.635	33.904	17.826	999.478	49.109	16951.992
PRINCIPAL DIV. ART.	42319.264	17484.323	4565.955	2580.425	143.330	74.301	4287.689	209.722	71665.010
PRIN. UNDIV. ART.	11475.970	4668.191	1264.302	719.679	38.902	19.451	1205.949	58.352	19450.797
MINOR DIV. ART.	4271.302	1737.479	470.567	267.861	14.479	7.239	448.849	21.718	7239.495
MINOR UNDIV. ART.	20100.108	8176.315	2214.419	1260.515	68.136	34.068	2112.215	102.204	34067.980
COLLECTORS	13142.576	5366.946	1440.477	818.524	44.541	22.474	1368.782	66.405	22270.725
FRONTAGE ROADS	8078.031	3285.979	889.953	506.588	27.383	13.692	848.878	41.075	13691.579
RAMPS	591.927	240.784	65.212	37.121	2.007	1.003	62.203	3.010	1003.266
TOTALS	192387.438	78904.719	20964.688	11889.099	651.861	332.240	19835.485	965.175	325930.704

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	21.07	21.21	20.87	20.80	21.06	21.38	20.72	20.83
INTERSTATE HWYS & FW	56.68	56.72	56.62	56.61	56.68	56.77	56.58	56.61
MULTILANE HIGHWAYS	49.37	49.47	49.24	49.19	49.37	49.59	49.13	49.20
PRINCIPAL DIV. ART.	32.53	33.07	31.78	31.51	32.50	33.71	31.19	31.60
PRIN. UNDIV. ART.	35.21	35.21	35.21	35.21	35.21	35.21	35.21	35.21
MINOR DIV. ART.	26.62	26.62	26.62	26.62	26.62	26.62	26.62	26.62
MINOR UNDIV. ART.	31.87	31.87	31.87	31.87	31.87	31.87	31.87	31.87
COLLECTORS	30.83	30.95	30.66	30.61	30.82	31.11	30.54	30.62
FRONTAGE ROADS	32.37	32.37	32.37	32.37	32.37	32.37	32.37	32.37
RAMPS	43.06	43.06	43.06	43.06	43.06	43.06	43.06	43.06

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	2866.6	1286.1	386.5	386.0	3.9	2.7	412.2	49.7	5393.8
INTERSTATE HWYS & FW	4690.8	2282.8	697.8	548.9	5.7	3.8	609.9	130.8	8970.4
MULTILANE HIGHWAYS	996.3	488.2	141.8	115.5	1.2	0.9	128.1	25.0	1897.1
PRINCIPAL DIV. ART.	3289.1	1522.3	447.6	416.7	4.4	3.1	458.8	66.8	6208.8
PRIN. UNDIV. ART.	903.9	416.0	128.1	124.1	1.2	0.8	137.6	20.8	1732.7
MINOR DIV. ART.	336.2	147.3	45.9	42.2	0.5	0.3	48.9	6.6	627.9
MINOR UNDIV. ART.	1565.9	710.5	219.3	213.8	2.2	1.4	240.1	34.3	2987.5
COLLECTORS	1039.5	464.8	142.7	132.1	1.4	1.0	151.2	21.4	1954.2
FRONTAGE ROADS	624.5	279.8	87.1	80.7	0.8	0.5	89.2	13.1	1175.9
RAMPS	49.9	23.4	7.2	6.7	0.1	0.0	7.5	1.3	96.1
TOTALS	16362.9	7621.2	2304.0	2066.5	21.5	14.5	2283.7	370.0	31044.3
DIURNAL	818.3	534.3	57.5	145.0	0.0	0.0	0.0	104.3	1659.4
ALL	17181.2	8155.5	2361.4	2211.5	21.5	14.5	2283.7	474.3	32703.6

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	26276.1	12805.3	3855.3	4531.8	9.4	5.4	2076.4	234.3	49794.1
INTERSTATE HWYS & FW	47919.6	27370.4	8607.2	8969.5	15.3	8.6	3447.0	550.5	96888.0
MULTILANE HIGHWAYS	10074.0	5707.2	1704.5	1681.1	3.1	1.8	673.4	106.2	19951.4
PRINCIPAL DIV. ART.	28679.8	14600.8	4327.1	4845.4	10.2	5.9	2198.9	251.9	54920.0
PRIN. UNDIV. ART.	7796.2	3976.6	1236.1	1482.7	2.8	1.6	646.2	71.6	15213.6
MINOR DIV. ART.	3018.8	1447.0	450.7	476.8	1.0	0.6	229.6	25.6	5650.1
MINOR UNDIV. ART.	13649.6	6808.6	2110.0	2496.1	4.9	2.7	1120.0	120.9	26312.8
COLLECTORS	9142.9	4481.8	1381.2	1524.3	3.2	1.8	715.0	78.5	17328.7
FRONTAGE ROADS	5349.5	2641.0	830.9	926.4	1.9	1.0	425.6	48.7	10225.0
RAMPS	398.7	209.9	65.6	80.5	0.2	0.1	34.9	3.5	793.5
TOTALS	152305.1	80048.8	24568.6	27014.5	52.1	29.4	11567.2	1491.7	297077.2

JORTS 1999 NETWORK AND 1993 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: ALL COUNTIES

	VEHICLE TYPE								
ROADWAY TYPE	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	TOTALS
LOCAL	2584.1	1150.0	341.4	483.1	8.3	4.7	2019.9	6.9	6598.3
INTERSTATE HWYS & FW	10553.2	4718.2	1465.4	1920.4	32.7	18.1	8231.4	36.1	26975.5
MULTILANE HIGHWAYS	1966.8	901.2	264.4	343.4	5.9	3.4	1392.0	6.3	4883.3
PRINCIPAL DIV. ART.	4170.0	1890.1	539.3	786.5	12.0	7.1	2808.2	12.2	10225.5
PRIN. UNDIV. ART.	1262.9	554.9	173.6	263.9	3.6	2.0	965.7	4.2	3230.8
MINOR DIV. ART.	378.6	161.1	50.5	74.1	1.1	0.6	266.4	1.1	933.5
MINOR UNDIV. ART.	2013.3	876.6	274.3	417.3	5.9	3.2	1520.0	6.4	5116.9
COLLECTORS	1278.0	551.6	169.5	253.4	3.7	2.1	907.2	3.8	3169.4
FRONTAGE ROADS	776.7	334.4	104.6	158.0	2.2	1.2	560.6	2.4	1940.2
RAMPS	87.7	37.9	11.9	19.1	0.3	0.1	64.4	0.3	221.7
TOTALS	25071.3	11176.2	3394.8	4719.1	75.6	42.6	18736.0	79.8	63295.2

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	537775.91	218756.30	59246.50	33724.93	1822.97	911.48	56512.05	2734.45	911484.60
INTERSTATE HWYS & FW	1633257.26	664375.83	179935.12	102424.61	5536.47	2768.23	171630.42	8304.70	2768232.64
MULTILANE HIGHWAYS	382735.11	155688.86	42165.73	24002.03	1297.41	648.70	40219.62	1946.11	648703.57
PRINCIPAL DIV. ART.	900273.98	366213.15	99182.73	56457.86	3051.78	1525.89	94605.06	4577.66	1525888.11
PRIN. UNDIV. ART.	168602.60	68584.11	18574.86	10573.38	571.53	285.77	17717.56	857.30	285767.12
MINOR DIV. ART.	88910.17	36166.85	9795.19	5575.72	301.39	150.70	9343.10	452.09	150695.21
MINOR UNDIV. ART.	332393.66	135210.98	36619.64	20845.03	1126.76	563.38	34929.50	1690.14	563379.08
COLLECTORS	293538.27	119405.40	32338.96	18408.33	995.04	497.52	30846.39	1492.57	497522.50
FRONTAGE ROADS	150517.94	61227.64	16582.48	9439.26	510.23	255.12	15817.14	765.35	255115.15
RAMPS	16831.80	6846.83	1854.35	1055.55	57.06	28.53	1768.77	85.59	28528.47
TOTALS	4504836.71	1832475.95	496295.57	282506.71	15270.63	7635.32	473389.62	22905.95	7635316.45

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

VEHICLE HOURS

COUNTY: JEFFERSON

VEHICLE TYPE

ROADWAY TYPE	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	TOTALS
LOCAL	29124.983	11847.451	3208.685	1826.482	98.729	49.364	3060.591	148.093	49364.377
INTERSTATE HWYS & FW	31464.762	12799.225	3466.457	1973.214	106.660	53.330	3306.466	159.990	53330.105
MULTILANE HIGHWAYS	9067.893	3688.635	999.005	568.665	30.739	15.369	952.897	46.108	15369.311
PRINCIPAL DIV. ART.	32149.227	13077.652	3541.864	2016.138	108.980	54.490	3378.393	163.471	54490.216
PRIN. UNDIV. ART.	5953.004	2421.561	655.839	373.324	20.180	10.090	625.570	30.270	10089.838
MINOR DIV. ART.	3514.711	1429.713	387.214	220.414	11.914	5.957	369.343	17.871	5957.138
MINOR UNDIV. ART.	11621.903	4727.554	1280.379	728.831	39.396	19.698	1221.285	59.094	19698.140
COLLECTORS	10587.591	4306.817	1166.430	663.968	35.890	17.945	1112.594	53.835	17945.070
FRONTAGE ROADS	6094.280	2479.029	671.404	382.184	20.659	10.329	640.416	30.988	10329.289
RAMPS	408.062	165.991	44.956	25.590	1.383	0.692	42.881	2.075	691.630
TOTALS	139986.417	56943.627	15422.232	8778.809	474.530	237.265	14710.437	711.795	237265.113

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87
INTERSTATE HWYS & FW	55.09	55.09	55.09	55.09	55.09	55.09	55.09	55.09
MULTILANE HIGHWAYS	47.84	47.84	47.84	47.84	47.84	47.84	47.84	47.84
PRINCIPAL DIV. ART.	32.10	32.10	32.10	32.10	32.10	32.10	32.10	32.10
PRIN. UNDIV. ART.	31.08	31.08	31.08	31.08	31.08	31.08	31.08	31.08
MINOR DIV. ART.	26.18	26.18	26.18	26.18	26.18	26.18	26.18	26.18
MINOR UNDIV. ART.	31.12	31.12	31.12	31.12	31.12	31.12	31.12	31.12
COLLECTORS	30.83	30.83	30.83	30.83	30.83	30.83	30.83	30.83
FRONTAGE ROADS	29.53	29.53	29.53	29.53	29.53	29.53	29.53	29.53
RAMPS	42.24	42.24	42.24	42.24	42.24	42.24	42.24	42.24

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	2163.8	928.0	292.4	275.2	2.9	1.9	302.9	36.1	4003.1
INTERSTATE HWYS & FW	3423.7	1606.4	501.2	374.0	4.1	2.7	433.0	92.0	6437.1
MULTILANE HIGHWAYS	924.0	423.3	132.5	100.1	1.1	0.7	117.8	22.5	1722.0
PRINCIPAL DIV. ART.	2592.4	1140.0	356.4	311.9	3.5	2.3	361.7	53.0	4821.1
PRIN. UNDIV. ART.	479.9	210.6	65.8	57.4	0.6	0.4	67.0	9.9	891.6
MINOR DIV. ART.	279.9	121.4	38.0	33.9	0.4	0.2	39.8	5.4	518.9
MINOR UNDIV. ART.	948.0	415.5	129.6	114.1	1.3	0.8	134.7	19.4	1763.6
COLLECTORS	853.3	373.9	116.8	103.6	1.2	0.8	121.3	17.3	1588.1
FRONTAGE ROADS	471.5	206.1	64.7	56.8	0.6	0.4	63.8	9.1	873.2
RAMPS	35.6	16.2	5.0	4.2	0.0	0.0	5.0	0.9	67.1
TOTALS	12172.0	5441.2	1702.4	1431.3	15.8	10.3	1647.2	265.6	22685.8
DIURNAL	565.9	290.0	32.1	95.5	0.0	0.0	0.0	77.6	1061.1
ALL	12738.0	5731.2	1734.5	1526.8	15.8	10.3	1647.2	343.2	23747.0

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	19854.9	9251.3	2916.3	3183.8	7.0	3.8	1553.2	176.3	36946.7
INTERSTATE HWYS & FW	33829.2	18330.6	5935.1	5780.1	10.9	6.0	2408.4	362.1	66662.2
MULTILANE HIGHWAYS	9372.3	4946.2	1594.7	1425.6	2.8	1.5	620.2	98.3	18061.7
PRINCIPAL DIV. ART.	22624.5	10937.2	3445.6	3581.0	7.8	4.3	1732.5	196.4	42529.4
PRIN. UNDIV. ART.	4141.4	1999.4	628.9	642.5	1.4	0.8	313.7	35.5	7763.6
MINOR DIV. ART.	2519.8	1195.4	373.3	380.3	0.8	0.5	187.7	21.1	4678.9
MINOR UNDIV. ART.	8321.7	4004.1	1252.7	1303.2	2.9	1.6	634.7	70.0	15590.9
COLLECTORS	7515.8	3610.3	1130.4	1186.9	2.6	1.4	577.3	63.6	14088.5
FRONTAGE ROADS	4078.5	1956.6	620.5	637.3	1.4	0.8	309.2	36.6	7640.8
RAMPS	282.3	143.0	45.1	49.4	0.1	0.1	23.3	2.3	545.7
TOTALS	112540.5	56374.1	17942.6	18170.1	37.8	20.7	8360.3	1062.1	214508.2

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1872.5	792.3	248.1	342.5	6.0	3.2	1428.6	4.8	4698.0
INTERSTATE HWYS & FW	7622.4	3290.5	1038.8	1358.3	22.8	12.3	5449.7	25.3	18820.0
MULTILANE HIGHWAYS	1744.6	753.4	237.6	303.8	5.1	2.7	1215.2	5.6	4268.1
PRINCIPAL DIV. ART.	3311.1	1398.0	438.7	635.2	9.3	5.0	2226.7	9.9	8034.0
PRIN. UNDIV. ART.	603.8	254.0	79.7	118.0	1.7	0.9	399.4	1.8	1459.3
MINOR DIV. ART.	312.1	131.6	41.2	59.8	0.9	0.5	212.8	0.9	759.7
MINOR UNDIV. ART.	1202.5	507.3	159.2	232.7	3.4	1.8	812.1	3.6	2922.6
COLLECTORS	1048.1	441.4	138.5	205.0	3.0	1.6	722.4	3.1	2563.1
FRONTAGE ROADS	539.5	227.0	71.1	104.0	1.5	0.8	362.5	1.6	1308.0
RAMPS	61.5	25.8	8.1	12.8	0.2	0.1	40.6	0.2	149.3
TOTALS	18318.1	7821.3	2461.0	3372.1	53.8	29.1	12870.1	56.8	44982.2

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	197450.64	80318.90	21753.04	12382.50	669.32	334.66	20749.05	1003.99	334662.10
INTERSTATE HWYS & FW	562348.78	228752.04	61953.68	35265.94	1906.27	953.13	59094.28	2859.40	953133.52
MULTILANE HIGHWAYS	108882.31	44291.11	11995.51	6828.21	369.09	184.55	11441.87	553.64	184546.28
PRINCIPAL DIV. ART.	265759.98	108105.75	29278.64	16666.30	900.88	450.44	27927.32	1351.32	450440.64
PRIN. UNDIV. ART.	138114.29	56182.08	15215.98	8661.40	468.18	234.09	14513.71	702.28	234092.02
MINOR DIV. ART.	30956.58	12592.51	3410.47	1941.34	104.94	52.47	3253.06	157.41	52468.78
MINOR UNDIV. ART.	214302.10	87173.74	23609.55	13439.28	726.45	363.22	22519.88	1089.67	363223.90
COLLECTORS	55598.79	22616.46	6125.29	3486.70	188.47	94.24	5842.58	282.71	94235.24
FRONTAGE ROADS	56655.26	23046.21	6241.68	3552.96	192.05	96.03	5953.60	288.08	96025.87
RAMPS	7844.35	3190.92	864.21	491.93	26.59	13.30	824.32	39.89	13295.51
TOTALS	1637913.08	666269.73	180448.05	102716.58	5552.25	2776.12	172119.68	8328.37	2776123.86

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

VEHICLE HOURS

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	8995.571	3659.215	991.037	564.129	30.493	15.247	945.297	45.740	15246.730
INTERSTATE HWYS & FW	9069.356	3689.230	999.166	568.756	30.744	15.372	953.051	46.115	15371.790
MULTILANE HIGHWAYS	2842.191	1156.145	313.123	178.239	9.635	4.817	298.671	14.452	4817.273
PRINCIPAL DIV. ART.	8613.589	3503.833	948.955	540.174	29.199	14.599	905.157	43.798	14599.303
PRIN. UNDIV. ART.	4013.401	1632.570	442.154	251.688	13.605	6.802	421.747	20.407	6802.374
MINOR DIV. ART.	766.357	311.738	84.429	48.060	2.598	1.299	80.532	3.897	1298.910
MINOR UNDIV. ART.	6784.687	2759.873	747.466	425.480	22.999	11.499	712.967	34.498	11499.469
COLLECTORS	1788.134	727.377	196.998	112.137	6.061	3.031	187.906	9.092	3030.736
FRONTAGE ROADS	1501.632	610.833	165.434	94.170	5.090	2.545	157.799	7.635	2545.139
RAMPS	179.021	72.822	19.723	11.227	0.607	0.303	18.812	0.910	303.425
TOTALS	44553.939	18123.636	4908.485	2794.061	151.030	75.515	4681.939	226.545	75515.151

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	23.05	23.05	23.05	23.05	23.05	23.05	23.05	23.05
INTERSTATE HWYS & FW	63.71	63.71	63.71	63.71	63.71	63.71	63.71	63.71
MULTILANE HIGHWAYS	42.12	42.12	42.12	42.12	42.12	42.12	42.12	42.12
PRINCIPAL DIV. ART.	33.55	33.55	33.55	33.55	33.55	33.55	33.55	33.55
PRIN. UNDIV. ART.	39.45	39.45	39.45	39.45	39.45	39.45	39.45	39.45
MINOR DIV. ART.	44.65	44.65	44.65	44.65	44.65	44.65	44.65	44.65
MINOR UNDIV. ART.	33.53	33.53	33.53	33.53	33.53	33.53	33.53	33.53
COLLECTORS	32.89	32.89	32.89	32.89	32.89	32.89	32.89	32.89
FRONTAGE ROADS	39.66	39.66	39.66	39.66	39.66	39.66	39.66	39.66
RAMPS	44.78	44.78	44.78	44.78	44.78	44.78	44.78	44.78

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	603.6	286.6	87.2	105.4	0.9	0.6	107.3	12.8	1204.2
INTERSTATE HWYS & FW	1070.6	569.5	172.8	153.4	1.3	0.9	153.6	34.7	2156.7
MULTILANE HIGHWAYS	229.8	114.9	34.7	37.1	0.3	0.2	38.7	6.4	462.0
PRINCIPAL DIV. ART.	613.1	299.0	90.3	104.4	0.9	0.6	108.2	15.5	1232.0
PRIN. UNDIV. ART.	298.8	147.9	44.6	50.1	0.4	0.3	51.5	8.0	601.6
MINOR DIV. ART.	60.0	30.1	9.0	10.2	0.1	0.1	10.5	1.7	121.7
MINOR UNDIV. ART.	489.7	238.5	72.0	83.2	0.7	0.5	87.3	12.4	984.4
COLLECTORS	128.4	62.5	18.9	21.9	0.2	0.1	22.9	3.2	258.1
FRONTAGE ROADS	113.8	56.5	17.0	19.1	0.2	0.1	20.0	3.2	229.9
RAMPS	14.1	7.1	2.1	2.4	0.0	0.0	2.5	0.4	28.7
TOTALS	3621.9	1812.5	548.6	587.2	4.9	3.4	602.4	98.3	7279.3
DIURNAL	173.9	160.4	15.4	31.4	0.0	0.0	0.0	19.3	400.5
ALL	3795.8	1973.0	564.0	618.6	4.9	3.4	602.4	117.6	7679.7

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	5551.2	2868.9	871.5	1284.6	2.1	1.2	513.1	54.7	11147.3
INTERSTATE HWYS & FW	12615.6	8023.0	2504.1	2956.8	3.8	2.2	936.3	181.9	27223.7
MULTILANE HIGHWAYS	2138.8	1226.9	376.5	501.9	0.8	0.4	186.0	24.0	4455.3
PRINCIPAL DIV. ART.	5217.9	2815.1	857.6	1248.0	2.0	1.1	493.4	51.3	10686.6
PRIN. UNDIV. ART.	2580.6	1430.0	437.3	641.1	1.0	0.6	243.9	26.7	5361.2
MINOR DIV. ART.	505.8	284.3	86.6	137.2	0.2	0.1	50.8	5.1	1070.1
MINOR UNDIV. ART.	4193.7	2259.0	685.4	1001.4	1.6	0.9	395.2	40.7	8577.9
COLLECTORS	1102.6	593.1	179.9	262.1	0.4	0.2	103.7	10.7	2252.8
FRONTAGE ROADS	949.1	528.4	161.0	237.3	0.4	0.2	91.2	9.4	1977.1
RAMPS	115.0	66.2	20.2	30.7	0.0	0.0	11.5	1.2	245.0
TOTALS	34970.5	20095.0	6180.2	8301.1	12.4	7.0	3025.0	405.8	72997.0

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	593.7	274.7	85.5	133.0	2.0	1.1	581.2	1.9	1673.0
INTERSTATE HWYS & FW	2577.6	1241.8	388.8	501.6	8.9	5.0	2631.0	10.0	7364.5
MULTILANE HIGHWAYS	388.6	182.2	56.8	85.3	1.2	0.7	358.7	1.4	1074.9
PRINCIPAL DIV. ART.	828.5	381.6	118.8	195.1	2.5	1.4	740.9	3.0	2271.8
PRIN. UNDIV. ART.	466.8	217.2	67.7	106.1	1.4	0.8	424.8	1.7	1286.6
MINOR DIV. ART.	109.6	51.3	16.0	24.7	0.3	0.2	100.8	0.4	303.3
MINOR UNDIV. ART.	671.2	309.6	96.4	157.3	2.0	1.1	603.5	2.4	1843.6
COLLECTORS	172.4	79.4	24.7	40.6	0.5	0.3	155.8	0.6	474.4
FRONTAGE ROADS	185.5	85.9	26.7	43.6	0.6	0.3	165.1	0.7	508.3
RAMPS	26.1	12.1	3.8	6.3	0.1	0.0	23.7	0.1	72.2
TOTALS	6020.0	2835.8	885.3	1293.4	19.5	11.0	5785.7	22.1	16872.7

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	34911.01	20114.29	1733.99	578.00	115.60	115.60	173.40	57.80	57799.69
INTERSTATE HWYS & FW	22866.64	13174.82	1135.76	378.59	75.72	75.72	113.58	37.86	37858.67
MULTILANE HIGHWAYS	24483.84	14106.58	1216.08	405.36	81.07	81.07	121.61	40.54	40536.16
PRINCIPAL DIV. ART.	83210.91	47942.71	4132.99	1377.66	275.53	275.53	413.30	137.77	137766.41
PRIN. UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR DIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COLLECTORS	6013.00	3464.44	298.66	99.55	19.91	19.91	29.87	9.96	9955.30
FRONTAGE ROADS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAMPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	171485.40	98802.85	8517.49	2839.16	567.83	567.83	851.75	283.92	283916.23

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

VEHICLE HOURS

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1223.384	704.864	60.764	20.255	4.051	4.051	6.076	2.025	2025.470
INTERSTATE HWYS & FW	344.235	198.334	17.098	5.699	1.140	1.140	1.710	0.570	569.926
MULTILANE HIGHWAYS	486.897	280.530	24.184	8.061	1.612	1.612	2.418	0.806	806.122
PRINCIPAL DIV. ART.	1635.193	942.131	81.218	27.073	5.415	5.415	8.122	2.707	2707.273
PRIN. UNDIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MINOR DIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MINOR UNDIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLLECTORS	122.881	70.799	6.103	2.034	0.407	0.407	0.610	0.203	203.445
FRONTAGE ROADS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RAMPS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	3812.590	2196.658	189.367	63.122	12.624	12.624	18.937	6.312	6312.236

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	28.73	28.73	28.73	28.73	28.73	28.73	28.73	28.73
INTERSTATE HWYS & FW	66.44	66.44	66.44	66.44	66.44	66.44	66.44	66.44
MULTILANE HIGHWAYS	52.53	52.53	52.53	52.53	52.53	52.53	52.53	52.53
PRINCIPAL DIV. ART.	51.83	51.83	51.83	51.83	51.83	51.83	51.83	51.83
PRIN. UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR DIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COLLECTORS	48.94	48.94	48.94	48.94	48.94	48.94	48.94	48.94
FRONTAGE ROADS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAMPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	90.5	67.9	5.8	4.2	0.1	0.2	0.8	0.7	170.2
INTERSTATE HWYS & FW	48.3	40.6	3.4	1.8	0.0	0.1	0.3	0.5	95.0
MULTILANE HIGHWAYS	47.9	38.8	3.3	2.1	0.1	0.1	0.4	0.5	93.0
PRINCIPAL DIV. ART.	146.5	118.0	9.9	6.8	0.2	0.3	1.2	1.6	284.5
PRIN. UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	10.1	8.1	0.7	0.5	0.0	0.0	0.1	0.1	19.6
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	343.2	273.4	23.0	15.4	0.4	0.6	2.8	3.4	662.3
DIURNAL	78.5	83.8	10.0	18.1	0.0	0.0	0.0	7.4	197.7
ALL	421.7	357.2	33.0	33.5	0.4	0.6	2.8	10.8	860.1

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	788.3	647.6	55.5	49.2	0.3	0.3	3.4	2.5	1546.9
INTERSTATE HWYS & FW	632.3	644.4	55.3	38.2	0.2	0.2	2.0	3.2	1375.6
MULTILANE HIGHWAYS	481.5	461.4	39.4	32.0	0.2	0.2	1.9	2.0	1018.5
PRINCIPAL DIV. ART.	1226.5	1133.9	96.3	98.1	0.5	0.6	6.0	4.3	2566.1
PRIN. UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	76.4	70.0	5.9	6.5	0.0	0.0	0.4	0.2	159.5
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	3205.0	2957.2	252.4	223.9	1.1	1.3	13.7	12.2	6666.8

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	112.2	80.7	7.0	6.6	0.3	0.4	5.0	0.1	212.4
INTERSTATE HWYS & FW	119.2	90.6	7.9	5.6	0.4	0.5	6.4	0.1	230.8
MULTILANE HIGHWAYS	102.5	75.9	6.6	5.6	0.3	0.4	5.0	0.1	196.4
PRINCIPAL DIV. ART.	328.0	241.0	21.1	18.8	1.0	1.1	15.4	0.4	626.8
PRIN. UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	20.7	14.9	1.3	1.3	0.1	0.1	1.0	0.0	39.4
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	682.6	503.0	44.0	38.0	2.0	2.4	32.9	0.8	1305.7

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	770137.57	319189.50	82733.53	46685.42	2607.89	1361.75	77434.49	3796.24	1303946.39
INTERSTATE HWYS & FW	2218472.67	906302.70	243024.56	138069.13	7518.45	3797.08	230838.28	11201.96	3759224.83
MULTILANE HIGHWAYS	516101.25	214086.55	55377.33	31235.61	1747.57	914.32	51783.10	2540.29	873786.01
PRINCIPAL DIV. ART.	1249244.87	522261.61	132594.36	74501.83	4228.19	2251.86	122945.68	6066.75	2114095.16
PRIN. UNDIV. ART.	306716.89	124766.19	33790.84	19234.79	1039.72	519.86	32231.27	1559.58	519859.14
MINOR DIV. ART.	119866.75	48759.36	13205.66	7517.07	406.33	203.16	12596.17	609.49	203163.99
MINOR UNDIV. ART.	546695.76	222384.72	60229.19	34284.31	1853.21	926.60	57449.38	2779.81	926602.98
COLLECTORS	355150.07	145486.30	38762.91	21994.59	1203.43	611.67	36718.85	1785.23	601713.04
FRONTAGE ROADS	207173.20	84273.84	22824.17	12992.22	702.28	351.14	21770.74	1053.42	351141.02
RAMPS	24676.15	10037.76	2718.56	1547.49	83.65	41.82	2593.09	125.47	41823.98
TOTALS	6314235.19	2597548.52	685261.11	388062.45	21390.71	10979.27	646361.05	31518.24	10695356.54

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

VEHICLE HOURS

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	39343.938	16211.530	4260.486	2410.866	133.273	68.662	4011.965	195.859	66636.578
INTERSTATE HWYS & FW	40878.353	16686.789	4482.721	2547.669	138.544	69.842	4261.227	206.676	69271.820
MULTILANE HIGHWAYS	12396.982	5125.310	1336.312	754.965	41.985	21.799	1253.987	61.366	20992.705
PRINCIPAL DIV. ART.	42398.009	17523.616	4572.037	2583.385	143.594	74.504	4291.672	209.976	71796.792
PRIN. UNDIV. ART.	9966.405	4054.131	1097.994	625.012	33.784	16.892	1047.317	50.677	16892.212
MINOR DIV. ART.	4281.068	1741.452	471.643	268.474	14.512	7.256	449.875	21.768	7256.048
MINOR UNDIV. ART.	18406.589	7487.426	2027.845	1154.312	62.395	31.198	1934.252	93.593	31197.609
COLLECTORS	12498.607	5104.992	1369.531	778.139	42.359	21.383	1301.110	63.131	21179.251
FRONTAGE ROADS	7595.912	3089.863	836.838	476.354	25.749	12.874	798.215	38.623	12874.428
RAMPS	587.083	238.813	64.679	36.817	1.990	0.995	61.693	2.985	995.055
TOTALS	188352.946	77263.921	20520.084	11635.992	638.185	325.405	19411.313	944.653	319092.500

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	21.09	21.23	20.89	20.82	21.08	21.40	20.74	20.85
INTERSTATE HWYS & FW	57.39	57.43	57.34	57.33	57.39	57.48	57.30	57.33
MULTILANE HIGHWAYS	46.86	46.97	46.70	46.65	46.85	47.10	46.59	46.67
PRINCIPAL DIV. ART.	33.72	34.21	33.03	32.79	33.69	34.80	32.49	32.87
PRIN. UNDIV. ART.	34.85	34.85	34.85	34.85	34.85	34.85	34.85	34.85
MINOR DIV. ART.	30.95	30.95	30.95	30.95	30.95	30.95	30.95	30.95
MINOR UNDIV. ART.	32.06	32.06	32.06	32.06	32.06	32.06	32.06	32.06
COLLECTORS	31.46	31.58	31.30	31.24	31.45	31.74	31.17	31.26
FRONTAGE ROADS	32.30	32.30	32.30	32.30	32.30	32.30	32.30	32.30
RAMPS	43.05	43.05	43.05	43.05	43.05	43.05	43.05	43.05

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: ALL COUNTIES

	VEHICLE TYPE								
ROADWAY TYPE	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	TOTALS
LOCAL	2857.9	1282.4	385.3	384.8	3.9	2.7	411.0	49.6	5377.5
INTERSTATE HWYS & FW	4542.6	2216.5	677.4	529.1	5.5	3.6	586.9	127.2	8688.9
MULTILANE HIGHWAYS	1201.6	576.9	170.5	139.3	1.5	1.0	156.8	29.3	2276.9
PRINCIPAL DIV. ART.	3352.0	1557.0	456.6	423.2	4.5	3.2	471.1	70.1	6337.6
PRIN. UNDIV. ART.	778.6	358.5	110.5	107.5	1.1	0.7	118.5	17.8	1493.2
MINOR DIV. ART.	339.9	151.4	47.0	44.0	0.5	0.3	50.3	7.1	640.6
MINOR UNDIV. ART.	1437.7	654.0	201.6	197.4	2.0	1.3	222.0	31.9	2748.0
COLLECTORS	991.8	444.5	136.3	126.0	1.4	0.9	144.3	20.7	1865.9
FRONTAGE ROADS	585.3	262.6	81.7	75.9	0.8	0.5	83.8	12.3	1103.0
RAMPS	49.7	23.3	7.2	6.6	0.1	0.0	7.5	1.3	95.7
TOTALS	16137.1	7527.2	2274.0	2033.9	21.2	14.3	2252.4	367.3	30627.4
DIURNAL	818.3	534.3	57.5	145.0	0.0	0.0	0.0	104.3	1659.4
ALL	16955.4	8061.4	2331.5	2178.9	21.2	14.3	2252.4	471.6	32286.8

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	26194.4	12767.7	3843.4	4517.5	9.4	5.3	2069.7	233.5	49641.0
INTERSTATE HWYS & FW	47077.1	26998.0	8494.4	8775.0	14.9	8.3	3346.7	547.1	95261.6
MULTILANE HIGHWAYS	11992.7	6634.5	2010.6	1959.5	3.7	2.1	808.1	124.3	23535.5
PRINCIPAL DIV. ART.	29069.0	14886.2	4399.6	4927.1	10.3	6.0	2231.9	252.0	55782.1
PRIN. UNDIV. ART.	6722.0	3429.4	1066.1	1283.6	2.4	1.3	557.6	62.2	13124.7
MINOR DIV. ART.	3025.6	1479.7	459.9	517.5	1.1	0.6	238.5	26.2	5749.0
MINOR UNDIV. ART.	12515.4	6263.1	1938.1	2304.6	4.5	2.5	1029.9	110.6	24168.7
COLLECTORS	8694.8	4273.5	1316.2	1455.5	3.1	1.7	681.5	74.6	16500.8
FRONTAGE ROADS	5027.6	2485.0	781.5	874.6	1.8	1.0	400.4	46.0	9617.9
RAMPS	397.3	209.3	65.4	80.2	0.2	0.1	34.8	3.5	790.6
TOTALS	150716.0	79426.3	24375.2	26695.1	51.3	28.9	11399.1	1480.0	294171.9

JORTS 1999 NETWORK AND 1999 TRIPS - NEW SEA90FAC AND HPM90FAC
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	2578.4	1147.6	340.6	482.1	8.2	4.7	2014.9	6.8	6583.4
INTERSTATE HWYS & FW	10319.1	4622.9	1435.5	1865.5	32.0	17.8	8087.2	35.4	26415.4
MULTILANE HIGHWAYS	2235.6	1011.5	301.1	394.7	6.6	3.8	1578.9	7.2	5539.4
PRINCIPAL DIV. ART.	4467.7	2020.6	578.5	849.1	12.8	7.6	2983.1	13.3	10932.6
PRIN. UNDIV. ART.	1070.6	471.2	147.4	224.1	3.1	1.7	824.2	3.5	2745.8
MINOR DIV. ART.	421.6	182.9	57.2	84.5	1.2	0.7	313.6	1.3	1063.0
MINOR UNDIV. ART.	1873.7	816.9	255.6	390.0	5.4	3.0	1415.6	6.0	4766.2
COLLECTORS	1241.2	535.7	164.5	246.9	3.6	2.0	879.2	3.7	3076.9
FRONTAGE ROADS	725.0	312.8	97.9	147.6	2.1	1.1	527.6	2.3	1816.4
RAMPS	87.7	37.9	11.9	19.1	0.2	0.1	64.4	0.3	221.6
TOTALS	25020.6	11160.1	3390.2	4703.5	75.3	42.5	18688.6	79.8	63160.6

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	571440.99	232450.57	62955.36	35836.13	1937.09	968.54	60049.73	2905.63	968544.05
INTERSTATE HWYS & FW	1997776.00	812654.64	220093.97	125284.26	6772.12	3386.06	209935.78	10158.18	3386061.02
MULTILANE HIGHWAYS	351293.45	142899.03	38701.82	22030.27	1190.83	595.41	36915.58	1786.24	595412.63
PRINCIPAL DIV. ART.	971119.73	395031.76	106987.77	60900.73	3291.93	1645.97	102049.87	4937.90	1645965.65
PRIN. UNDIV. ART.	243555.47	99073.41	26832.38	15273.82	825.61	412.81	25593.96	1238.42	412805.88
MINOR DIV. ART.	113147.56	46026.13	12465.41	7095.69	383.55	191.78	11890.08	575.33	191775.53
MINOR UNDIV. ART.	455118.29	185132.86	50140.15	28541.32	1542.77	771.39	47825.99	2314.16	771386.93
COLLECTORS	348987.50	141961.02	38447.78	21885.66	1183.01	591.50	36673.26	1774.51	591504.24
FRONTAGE ROADS	210143.94	85482.28	23151.45	13178.52	712.35	356.18	22082.92	1068.53	356176.17
RAMPS	19085.82	7763.72	2102.67	1196.91	64.70	32.35	2005.63	97.05	32348.84
TOTALS	5281668.75	2148475.43	581878.76	331223.29	17903.96	8951.98	555022.82	26855.94	8951980.94

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

VEHICLE HOURS

COUNTY: JEFFERSON

	VEHICLE TYPE								
ROADWAY TYPE	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	TOTALS
LOCAL	31009.254	12613.934	3416.274	1944.648	105.116	52.558	3258.600	157.674	52558.058
INTERSTATE HWYS & FW	40646.925	16534.342	4478.051	2549.044	137.786	68.893	4271.372	206.679	68893.093
MULTILANE HIGHWAYS	7860.045	3197.306	865.937	492.918	26.644	13.322	825.971	39.966	13322.109
PRINCIPAL DIV. ART.	41646.932	16941.125	4588.221	2611.757	141.176	70.588	4376.457	211.764	70588.021
PRIN. UNDIV. ART.	8548.740	3477.454	941.810	536.107	28.979	14.489	898.342	43.468	14489.390
MINOR DIV. ART.	4540.683	1847.058	500.245	284.755	15.392	7.696	477.157	23.088	7696.074
MINOR UNDIV. ART.	16326.691	6641.366	1798.703	1023.877	55.345	27.672	1715.686	83.017	27672.358
COLLECTORS	13098.803	5328.326	1443.088	821.450	44.403	22.201	1376.484	66.604	22201.360
FRONTAGE ROADS	8418.444	3424.452	927.456	527.936	28.537	14.269	884.650	42.806	14268.550
RAMPS	487.467	198.292	53.704	30.570	1.652	0.826	51.225	2.479	826.215
TOTALS	172583.984	70203.655	19013.490	10823.063	585.030	292.515	18135.944	877.546	292515.228

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	19.81	19.81	19.81	19.81	19.81	19.81	19.81	19.81
INTERSTATE HWYS & FW	53.35	53.35	53.35	53.35	53.35	53.35	53.35	53.35
MULTILANE HIGHWAYS	50.63	50.63	50.63	50.63	50.63	50.63	50.63	50.63
PRINCIPAL DIV. ART.	29.03	29.03	29.03	29.03	29.03	29.03	29.03	29.03
PRIN. UNDIV. ART.	31.51	31.51	31.51	31.51	31.51	31.51	31.51	31.51
MINOR DIV. ART.	25.85	25.85	25.85	25.85	25.85	25.85	25.85	25.85
MINOR UNDIV. ART.	31.97	31.97	31.97	31.97	31.97	31.97	31.97	31.97
COLLECTORS	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
FRONTAGE ROADS	30.68	30.68	30.68	30.68	30.68	30.68	30.68	30.68
RAMPS	41.35	41.35	41.35	41.35	41.35	41.35	41.35	41.35

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1692.3	745.2	235.7	197.0	2.2	1.5	287.5	29.3	3190.7
INTERSTATE HWYS & FW	3035.1	1432.9	449.5	303.7	3.7	2.6	485.6	84.3	5797.2
MULTILANE HIGHWAYS	590.7	274.5	86.3	57.5	0.7	0.5	92.3	15.5	1117.9
PRINCIPAL DIV. ART.	2328.8	1046.3	330.1	257.8	2.9	2.0	385.8	45.9	4399.6
PRIN. UNDIV. ART.	505.5	228.4	71.9	54.6	0.7	0.5	86.2	10.7	958.6
MINOR DIV. ART.	266.6	118.4	37.4	29.1	0.3	0.2	45.7	5.2	503.0
MINOR UNDIV. ART.	962.9	434.4	136.8	105.0	1.3	0.9	164.5	20.3	1826.0
COLLECTORS	768.6	344.9	108.7	84.3	1.0	0.7	131.9	15.7	1455.9
FRONTAGE ROADS	474.5	214.3	67.5	52.1	0.6	0.4	78.4	9.6	897.5
RAMPS	30.3	14.2	4.4	3.2	0.0	0.0	5.2	0.8	58.3
TOTALS	10655.4	4853.5	1528.4	1144.3	13.4	9.3	1763.0	237.3	20204.7
DIURNAL	354.6	153.3	11.1	57.2	0.0	0.0	0.0	89.7	665.9
ALL	11010.0	5006.9	1539.5	1201.5	13.4	9.3	1763.0	327.0	20870.6

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	17622.4	8053.9	2530.8	1747.8	6.3	3.5	1593.3	173.8	31731.9
INTERSTATE HWYS & FW	27209.2	13931.7	4396.9	3623.0	11.4	6.4	2862.6	393.5	52434.6
MULTILANE HIGHWAYS	5741.5	2879.2	908.3	675.7	2.2	1.2	539.9	83.3	10831.1
PRINCIPAL DIV. ART.	22558.2	10562.4	3321.9	2293.1	8.2	4.6	2068.0	236.7	41053.1
PRIN. UNDIV. ART.	4739.9	2258.1	710.4	481.6	1.7	1.0	438.4	47.4	8678.5
MINOR DIV. ART.	2676.2	1250.0	393.0	253.4	0.9	0.5	233.7	25.2	4833.0
MINOR UNDIV. ART.	9141.8	4339.4	1364.9	942.1	3.4	1.9	851.7	91.2	16736.5
COLLECTORS	7452.4	3515.1	1105.4	750.9	2.7	1.5	682.9	73.0	13584.1
FRONTAGE ROADS	4450.8	2102.0	661.3	458.5	1.6	0.9	413.7	47.1	8135.9
RAMPS	246.2	123.7	39.0	29.8	0.1	0.1	26.3	2.6	467.8
TOTALS	101838.5	49015.6	15431.8	11255.8	38.7	21.6	9710.6	1173.8	188486.5

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1589.8	707.0	237.5	313.7	4.7	2.7	1056.4	5.1	3917.0
INTERSTATE HWYS & FW	7070.9	3131.6	1052.0	1417.0	20.2	11.4	4493.1	30.0	17226.2
MULTILANE HIGHWAYS	1277.4	571.8	192.1	245.2	3.6	2.0	801.7	5.3	3099.2
PRINCIPAL DIV. ART.	2829.3	1237.4	415.6	576.4	7.7	4.3	1709.1	10.3	6790.2
PRIN. UNDIV. ART.	701.2	303.8	102.0	147.5	1.8	1.0	405.6	2.6	1665.6
MINOR DIV. ART.	317.4	139.0	46.7	65.4	0.8	0.5	189.1	1.1	760.0
MINOR UNDIV. ART.	1317.6	572.9	192.5	276.6	3.5	2.0	785.4	4.9	3155.5
COLLECTORS	994.7	433.1	145.5	208.8	2.7	1.5	599.8	3.7	2389.7
FRONTAGE ROADS	609.1	264.4	88.8	126.4	1.6	0.9	357.8	2.3	1451.3
RAMPS	55.7	23.7	8.0	12.5	0.1	0.1	32.0	0.2	132.4
TOTALS	16763.2	7384.6	2480.6	3389.5	46.8	26.5	10430.0	65.6	40587.0

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	208874.46	84965.88	23011.59	13098.91	708.05	354.02	21949.52	1062.07	354024.51
INTERSTATE HWYS & FW	688483.43	280061.05	75849.87	43176.08	2333.84	1166.92	72349.11	3500.76	1166921.06
MULTILANE HIGHWAYS	126100.08	51294.95	13892.38	7907.97	427.46	213.73	13251.19	641.19	213728.95
PRINCIPAL DIV. ART.	286989.55	116741.51	31617.49	17997.65	972.85	486.42	30158.22	1459.27	486422.97
PRIN. UNDIV. ART.	169192.46	68824.05	18639.85	10610.37	573.53	286.77	17779.55	860.30	286766.88
MINOR DIV. ART.	13375.58	5440.92	1473.58	838.81	45.34	22.67	1405.57	68.01	22670.48
MINOR UNDIV. ART.	256688.82	104415.79	28279.28	16097.43	870.13	435.07	26974.08	1305.20	435065.79
COLLECTORS	69969.67	28462.24	7708.52	4387.93	237.19	118.59	7352.74	355.78	118592.66
FRONTAGE ROADS	94230.69	38331.13	10381.35	5909.38	319.43	159.71	9902.21	479.14	159713.03
RAMPS	9196.24	3740.84	1013.15	576.71	31.17	15.59	966.38	46.76	15586.85
TOTALS	1923100.98	782278.36	211867.06	120601.25	6518.99	3259.49	202088.58	9778.48	3259493.18

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

VEHICLE HOURS

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	9529.261	3876.309	1049.834	597.598	32.303	16.151	1001.380	48.454	16151.289
INTERSTATE HWYS & FW	11698.255	4758.612	1288.791	733.619	39.655	19.828	1229.308	59.483	19827.550
MULTILANE HIGHWAYS	3499.404	1423.486	385.528	219.454	11.862	5.931	367.734	17.794	5931.193
PRINCIPAL DIV. ART.	10305.758	4192.173	1135.380	646.293	34.935	17.467	1082.978	52.402	17467.386
PRIN. UNDIV. ART.	4902.653	1994.299	540.123	307.454	16.619	8.310	515.194	24.929	8309.581
MINOR DIV. ART.	461.088	187.561	50.798	28.916	1.563	0.782	48.453	2.345	781.506
MINOR UNDIV. ART.	8176.898	3326.196	900.845	512.789	27.718	13.859	859.267	41.577	13859.149
COLLECTORS	2246.584	913.865	247.505	140.887	7.616	3.808	236.082	11.423	3807.770
FRONTAGE ROADS	2688.265	1093.531	296.165	168.586	9.113	4.556	282.496	13.669	4556.381
RAMPS	208.821	84.944	23.006	13.096	0.708	0.354	21.944	1.062	353.934
TOTALS	53716.986	21850.977	5917.973	3368.692	182.091	91.046	5644.836	273.137	91045.739

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	23.02	23.02	23.02	23.02	23.02	23.02	23.02	23.02
INTERSTATE HWYS & FW	61.75	61.75	61.75	61.75	61.75	61.75	61.75	61.75
MULTILANE HIGHWAYS	40.63	40.63	40.63	40.63	40.63	40.63	40.63	40.63
PRINCIPAL DIV. ART.	32.18	32.18	32.18	32.18	32.18	32.18	32.18	32.18
PRIN. UNDIV. ART.	39.23	39.23	39.23	39.23	39.23	39.23	39.23	39.23
MINOR DIV. ART.	30.12	30.12	30.12	30.12	30.12	30.12	30.12	30.12
MINOR UNDIV. ART.	33.41	33.41	33.41	33.41	33.41	33.41	33.41	33.41
COLLECTORS	33.02	33.02	33.02	33.02	33.02	33.02	33.02	33.02
FRONTAGE ROADS	40.05	40.05	40.05	40.05	40.05	40.05	40.05	40.05
RAMPS	45.10	45.10	45.10	45.10	45.10	45.10	45.10	45.10

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	537.0	216.2	52.6	66.3	0.7	0.5	92.6	12.0	977.9
INTERSTATE HWYS & FW	1062.2	454.7	109.5	108.3	1.2	0.8	155.8	37.3	1929.8
MULTILANE HIGHWAYS	228.3	95.2	23.0	26.1	0.3	0.2	38.1	6.6	417.8
PRINCIPAL DIV. ART.	588.7	243.5	59.1	71.3	0.8	0.5	100.7	15.2	1079.8
PRIN. UNDIV. ART.	302.2	126.6	30.6	35.6	0.4	0.3	51.5	8.6	555.9
MINOR DIV. ART.	27.3	11.2	2.7	3.2	0.0	0.0	4.7	0.7	50.0
MINOR UNDIV. ART.	490.9	203.0	49.2	58.4	0.7	0.4	85.6	13.2	901.3
COLLECTORS	134.4	55.6	13.5	16.0	0.2	0.1	23.5	3.6	246.9
FRONTAGE ROADS	163.1	68.7	16.6	19.4	0.2	0.1	27.8	4.7	300.7
RAMPS	13.6	5.8	1.4	1.6	0.0	0.0	2.4	0.4	25.2
TOTALS	3547.7	1480.5	358.2	406.2	4.5	3.0	582.7	102.5	6485.4
DIURNAL	114.1	85.2	4.7	18.1	0.0	0.0	0.0	19.5	241.5
ALL	3661.8	1565.7	362.9	424.3	4.5	3.0	582.7	122.0	6726.9

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	5572.8	2379.1	584.4	577.3	2.0	1.1	490.2	56.5	9663.3
INTERSTATE HWYS & FW	10894.8	5125.5	1238.0	1508.4	4.1	2.3	1029.0	205.8	20008.0
MULTILANE HIGHWAYS	2175.5	981.4	239.5	255.9	0.8	0.4	203.1	27.7	3884.4
PRINCIPAL DIV. ART.	5496.9	2420.7	593.0	621.6	2.1	1.2	520.3	60.3	9716.0
PRIN. UNDIV. ART.	2735.4	1233.2	301.5	332.4	1.1	0.6	269.2	31.5	4904.9
MINOR DIV. ART.	261.5	114.9	28.2	27.9	0.1	0.1	23.7	2.7	459.0
MINOR UNDIV. ART.	4556.8	2024.1	496.0	511.8	1.7	0.9	429.5	47.8	8068.6
COLLECTORS	1250.9	555.2	136.1	139.9	0.5	0.3	117.7	13.1	2213.5
FRONTAGE ROADS	1424.2	646.6	158.1	178.7	0.6	0.3	144.8	16.5	2569.8
RAMPS	110.4	52.0	12.7	15.3	0.0	0.0	12.2	1.3	204.0
TOTALS	34479.1	15532.8	3787.5	4169.2	13.0	7.2	3239.6	463.1	61691.4

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HOGV	LDDV	LDDT	HDDV	MC	
LOCAL	577.0	233.1	62.5	121.3	1.6	0.9	355.6	2.0	1354.1
INTERSTATE HWYS & FW	2728.0	1131.8	302.8	525.1	8.3	4.6	1804.3	11.9	6516.8
MULTILANE HIGHWAYS	402.8	162.3	43.5	84.3	1.1	0.6	238.6	1.6	934.8
PRINCIPAL DIV. ART.	821.8	325.3	87.2	179.7	2.2	1.2	469.9	3.1	1890.5
PRIN. UNDIV. ART.	517.8	206.5	55.3	111.9	1.4	0.8	299.4	2.1	1195.1
MINOR DIV. ART.	37.7	15.0	4.0	8.2	0.1	0.1	21.2	0.1	86.4
MINOR UNDIV. ART.	736.7	291.7	78.2	162.3	1.9	1.1	418.3	2.8	1692.9
COLLECTORS	199.3	78.8	21.1	44.1	0.5	0.3	113.5	0.8	458.4
FRONTAGE ROADS	285.0	112.9	30.2	62.7	0.7	0.4	163.2	1.2	656.3
RAMPS	28.1	11.1	3.0	6.4	0.1	0.0	16.2	0.1	64.9
TOTALS	6334.1	2568.3	687.8	1306.0	17.9	10.0	3900.3	25.8	14850.2

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	37640.85	21687.11	1869.58	623.19	124.64	124.64	186.96	62.32	62319.28
INTERSTATE HWYS & FW	27661.61	15937.48	1373.92	457.97	91.59	91.59	137.39	45.80	45797.36
MULTILANE HIGHWAYS	31401.30	18092.14	1559.67	519.89	103.98	103.98	155.97	51.99	51988.91
PRINCIPAL DIV. ART.	97525.00	56189.90	4843.96	1614.65	322.93	322.93	484.40	161.47	161465.24
PRIN. UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR DIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COLLECTORS	6901.18	3976.17	342.77	114.26	22.85	22.85	34.28	11.43	11425.79
FRONTAGE ROADS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAMPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	201129.93	115882.81	9989.90	3329.97	665.99	665.99	998.99	333.00	332996.58

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

VEHICLE HOURS

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1322.278	761.843	65.676	21.892	4.378	4.378	6.568	2.189	2189.203
INTERSTATE HWYS & FW	419.059	241.445	20.814	6.938	1.388	1.388	2.081	0.694	693.806
MULTILANE HIGHWAYS	623.661	359.328	30.977	10.326	2.065	2.065	3.098	1.033	1032.551
PRINCIPAL DIV. ART.	2240.167	1290.693	111.267	37.089	7.418	7.418	11.127	3.709	3708.887
PRIN. UNDIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MINOR DIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MINOR UNDIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLLECTORS	141.182	81.343	7.012	2.337	0.467	0.467	0.701	0.234	233.745
FRONTAGE ROADS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RAMPS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	4746.347	2734.650	235.746	78.582	15.716	15.716	23.575	7.858	7858.191

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	28.66	28.66	28.66	28.66	28.66	28.66	28.66	28.66
INTERSTATE HWYS & FW	66.04	66.04	66.04	66.04	66.04	66.04	66.04	66.04
MULTILANE HIGHWAYS	52.53	52.53	52.53	52.53	52.53	52.53	52.53	52.53
PRINCIPAL DIV. ART.	46.09	46.09	46.09	46.09	46.09	46.09	46.09	46.09
PRIN. UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR DIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COLLECTORS	48.89	48.89	48.89	48.89	48.89	48.89	48.89	48.89
FRONTAGE ROADS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAMPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	80.2	49.5	5.0	2.4	0.1	0.1	0.6	0.7	138.6
INTERSTATE HWYS & FW	46.1	29.7	3.0	1.1	0.0	0.1	0.3	0.5	80.9
MULTILANE HIGHWAYS	49.1	31.8	3.2	1.3	0.1	0.1	0.4	0.5	86.4
PRINCIPAL DIV. ART.	152.1	98.1	9.9	4.4	0.2	0.3	1.2	1.6	267.7
PRIN. UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	9.4	6.2	0.6	0.3	0.0	0.0	0.1	0.1	16.7
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	336.8	215.3	21.7	9.5	0.4	0.6	2.6	3.4	590.3
DIURNAL	53.2	45.2	4.2	9.1	0.0	0.0	0.0	6.5	118.1
ALL	390.0	260.5	25.9	18.6	0.4	0.6	2.6	9.9	708.4

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	766.7	500.1	50.0	20.6	0.3	0.3	3.1	2.6	1343.7
INTERSTATE HWYS & FW	526.2	375.6	38.0	17.8	0.2	0.2	2.0	3.6	963.5
MULTILANE HIGHWAYS	458.8	325.6	32.8	15.8	0.2	0.2	2.0	2.4	837.8
PRINCIPAL DIV. ART.	1272.5	889.8	89.4	45.1	0.5	0.6	6.2	5.0	2309.2
PRIN. UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	68.4	49.9	5.0	2.9	0.0	0.0	0.4	0.3	127.0
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	3092.6	2141.0	215.2	102.2	1.2	1.3	13.8	13.8	5581.2

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	108.3	64.6	6.9	6.0	0.3	0.3	2.7	0.1	189.2
INTERSTATE HWYS & FW	122.9	77.9	8.4	5.7	0.4	0.4	3.9	0.2	219.8
MULTILANE HIGHWAYS	114.5	70.1	7.5	6.0	0.3	0.3	3.2	0.2	202.0
PRINCIPAL DIV. ART.	318.8	191.2	20.5	17.7	0.8	0.9	8.4	0.4	558.8
PRIN. UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	21.1	12.4	1.3	1.3	0.1	0.1	0.6	0.0	36.9
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	685.7	416.1	44.7	36.6	1.8	2.0	18.7	0.9	1206.6

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	817956.30	339103.56	87836.53	49558.23	2769.78	1447.21	82186.21	4030.02	1384887.84
INTERSTATE HWYS & FW	2713921.03	1108653.18	297317.76	168918.31	9197.56	4644.58	282422.28	13704.74	4598779.44
MULTILANE HIGHWAYS	508794.83	212286.12	54153.87	30458.13	1722.26	913.12	50322.74	2479.41	861130.49
PRINCIPAL DIV. ART.	1355634.29	567963.17	143449.22	80513.03	4587.71	2455.32	132692.49	6558.63	2293853.86
PRIN. UNDIV. ART.	412747.93	167897.46	45472.23	25884.19	1399.15	699.57	43373.51	2098.72	699572.76
MINOR DIV. ART.	126523.15	51467.04	13938.99	7934.50	428.89	214.45	13295.65	643.34	214446.01
MINOR UNDIV. ART.	711807.10	289548.65	78419.43	44638.75	2412.91	1206.45	74800.07	3619.36	1206452.72
COLLECTORS	425858.35	174399.43	46499.07	26387.84	1443.05	732.95	44060.29	2141.72	721522.69
FRONTAGE ROADS	304374.63	123813.41	33532.80	19087.90	1031.78	515.89	31985.13	1547.67	515889.20
RAMPS	28282.06	11504.57	3115.82	1773.62	95.87	47.94	2972.01	143.81	47935.69
TOTALS	7405899.67	3046636.60	803735.72	455154.51	25088.94	12877.47	758110.39	36967.42	12544470.70

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

VEHICLE HOURS

COUNTY: ALL COUNTIES

VEHICLE TYPE

ROADWAY TYPE	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	TOTALS
LOCAL	41860.793	17252.086	4531.784	2564.138	141.797	73.088	4266.547	208.317	70898.550
INTERSTATE HWYS & FW	52764.239	21534.399	5787.656	3289.602	178.829	90.108	5502.761	266.856	89414.450
MULTILANE HIGHWAYS	11983.109	4980.120	1282.441	722.698	40.572	21.318	1196.802	58.792	20285.853
PRINCIPAL DIV. ART.	54192.858	22423.990	5834.868	3295.139	183.529	95.473	5470.562	267.875	91764.294
PRIN. UNDIV. ART.	13451.393	5471.753	1481.933	843.562	45.598	22.799	1413.536	68.397	22798.971
MINOR DIV. ART.	5001.772	2034.619	551.043	313.670	16.955	8.478	525.610	25.433	8477.579
MINOR UNDIV. ART.	24503.589	9967.562	2699.548	1536.666	83.063	41.532	2574.953	124.595	41531.507
COLLECTORS	15486.568	6323.534	1697.606	964.675	52.486	26.477	1613.267	78.261	26242.874
FRONTAGE ROADS	11106.709	4517.983	1223.621	696.522	37.650	18.825	1167.146	56.475	18824.931
RAMPS	696.288	283.236	76.710	43.666	2.360	1.180	73.169	3.540	1180.150
TOTALS	231047.318	94789.283	25167.209	14270.338	782.838	399.277	23804.355	1158.541	391419.158

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	21.04	21.18	20.84	20.77	21.03	21.36	20.69	20.79
INTERSTATE HWYS & FW	55.61	55.65	55.55	55.53	55.61	55.71	55.51	55.54
MULTILANE HIGHWAYS	48.27	48.38	48.12	48.07	48.26	48.51	48.00	48.09
PRINCIPAL DIV. ART.	30.92	31.36	30.30	30.07	30.90	31.89	29.80	30.15
PRIN. UNDIV. ART.	34.67	34.67	34.67	34.67	34.67	34.67	34.67	34.67
MINOR DIV. ART.	26.30	26.30	26.30	26.30	26.30	26.30	26.30	26.30
MINOR UNDIV. ART.	32.49	32.49	32.49	32.49	32.49	32.49	32.49	32.49
COLLECTORS	30.81	30.93	30.64	30.59	30.80	31.08	30.52	30.61
FRONTAGE ROADS	33.58	33.58	33.58	33.58	33.58	33.58	33.58	33.58
RAMPS	42.57	42.57	42.57	42.57	42.57	42.57	42.57	42.57

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	2309.5	1010.9	293.3	265.7	3.0	2.1	380.7	42.0	4307.2
INTERSTATE HWYS & FW	4143.4	1917.3	562.0	413.0	4.9	3.4	641.7	122.2	7807.9
MULTILANE HIGHWAYS	868.1	401.5	112.5	84.9	1.1	0.8	130.7	22.6	1622.2
PRINCIPAL DIV. ART.	3069.6	1388.0	399.0	333.5	3.9	2.8	487.6	62.7	5747.2
PRIN. UNDIV. ART.	807.7	355.0	102.6	90.2	1.1	0.7	137.8	19.4	1514.4
MINOR DIV. ART.	293.9	129.7	40.1	32.3	0.4	0.3	50.5	5.9	553.0
MINOR UNDIV. ART.	1453.8	637.3	186.0	163.4	1.9	1.3	250.1	33.5	2727.4
COLLECTORS	912.5	406.7	122.8	100.6	1.2	0.8	155.4	19.5	1719.5
FRONTAGE ROADS	637.5	283.0	84.2	71.4	0.8	0.6	106.2	14.4	1198.1
RAMPS	43.9	20.0	5.8	4.8	0.1	0.0	7.6	1.2	83.5
TOTALS	14540.0	6549.4	1908.3	1560.0	18.3	12.9	2348.3	343.3	27280.4
DIURNAL	521.8	283.7	20.1	84.3	0.0	0.0	0.0	115.7	1025.5
ALL	15061.8	6833.0	1928.4	1644.3	18.3	12.9	2348.3	459.0	28305.9

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	23961.9	10933.1	3165.3	2345.7	8.6	4.9	2086.6	232.8	42738.8
INTERSTATE HWYS & FW	38630.2	19432.8	5672.8	5149.1	15.7	8.8	3893.6	602.9	73406.1
MULTILANE HIGHWAYS	8375.7	4186.2	1180.6	947.4	3.1	1.8	745.1	113.4	15553.4
PRINCIPAL DIV. ART.	29327.6	13872.8	4004.3	2959.9	10.8	6.3	2594.6	301.9	53078.3
PRIN. UNDIV. ART.	7475.4	3491.3	1011.9	814.0	2.8	1.6	707.6	78.8	13583.4
MINOR DIV. ART.	2937.7	1365.0	421.1	281.2	1.0	0.6	257.4	27.9	5292.0
MINOR UNDIV. ART.	13698.6	6363.5	1861.0	1453.9	5.1	2.8	1281.2	139.0	24805.1
COLLECTORS	8771.6	4120.3	1246.5	893.7	3.2	1.8	801.0	86.4	15924.6
FRONTAGE ROADS	5875.0	2748.6	819.3	637.2	2.2	1.2	558.5	63.6	10705.7
RAMPS	356.6	175.7	51.7	45.1	0.2	0.1	38.5	3.9	671.8
TOTALS	139410.2	66689.4	19434.5	15527.3	52.8	30.0	12964.0	1650.7	255759.0

JORTS 2006 TRIPS ON 1993 NETWORK
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	2275.1	1004.7	307.0	440.9	6.6	3.9	1414.8	7.3	5460.3
INTERSTATE HWYS & FW	9921.8	4341.3	1363.1	1947.8	28.8	16.5	6301.3	42.0	23962.8
MULTILANE HIGHWAYS	1794.7	804.1	243.1	335.5	5.0	3.0	1043.5	7.1	4236.0
PRINCIPAL DIV. ART.	3970.0	1753.9	523.4	773.8	10.6	6.5	2187.5	13.9	9239.5
PRIN. UNDIV. ART.	1219.0	510.2	157.3	259.4	3.2	1.8	705.0	4.7	2860.7
MINOR DIV. ART.	355.1	153.9	50.7	73.7	0.9	0.5	210.3	1.3	846.4
MINOR UNDIV. ART.	2054.3	864.6	270.6	438.9	5.4	3.1	1203.7	7.8	4848.4
COLLECTORS	1215.1	524.2	167.9	254.2	3.3	1.9	713.9	4.4	2884.9
FRONTAGE ROADS	894.1	377.3	119.0	189.1	2.4	1.3	521.0	3.4	2107.6
RAMPS	83.9	34.8	10.9	18.8	0.2	0.1	48.2	0.3	197.3
TOTALS	23783.0	10369.1	3213.1	4732.1	66.6	38.6	14349.1	92.3	56643.8

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	568555.98	231277.01	62637.52	35655.21	1927.31	963.65	59746.56	2890.96	963654.20
INTERSTATE HWYS & FW	1960963.15	797679.92	216038.31	122975.65	6647.33	3323.67	206067.31	9971.00	3323666.35
MULTILANE HIGHWAYS	405568.38	164976.97	44681.26	25433.95	1374.81	687.40	42619.05	2062.21	687404.03
PRINCIPAL DIV. ART.	1032007.24	419799.55	113695.71	64719.10	3498.33	1749.16	108448.22	5247.49	1749164.81
PRIN. UNDIV. ART.	220611.70	89740.35	24304.68	13834.97	747.84	373.92	23182.92	1121.75	373918.13
MINOR DIV. ART.	162998.89	66304.63	17957.51	10221.96	552.54	276.27	17128.70	828.81	276269.31
MINOR UNDIV. ART.	353959.23	143983.41	38995.51	22197.44	1199.86	599.93	37195.72	1799.79	599930.89
COLLECTORS	325907.49	132572.54	35905.06	20438.27	1104.77	552.39	34247.91	1657.16	552385.57
FRONTAGE ROADS	189863.36	77232.55	20917.15	11906.69	643.60	321.80	19951.74	965.41	321802.30
RAMPS	19279.82	7842.64	2124.05	1209.07	65.36	32.68	2026.01	98.03	32677.66
TOTALS	5239715.22	2131409.58	577256.76	328592.31	17761.75	8880.87	550614.14	26642.62	8880873.25

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

VEHICLE HOURS

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	30835.255	12543.154	3397.104	1933.736	104.526	52.263	3240.315	156.789	52263.144
INTERSTATE HWYS & FW	38612.046	15706.595	4253.870	2421.433	130.888	65.444	4057.537	196.332	65444.146
MULTILANE HIGHWAYS	9473.625	3853.678	1043.704	594.109	32.114	16.057	995.533	48.171	16056.991
PRINCIPAL DIV. ART.	39533.309	16081.346	4355.365	2479.208	134.011	67.006	4154.348	201.017	67005.608
PRIN. UNDIV. ART.	7397.059	3008.973	814.930	463.883	25.075	12.537	777.318	37.612	12537.388
MINOR DIV. ART.	5389.501	2192.339	593.759	337.986	18.269	9.135	566.354	27.404	9134.747
MINOR UNDIV. ART.	12498.271	5084.043	1376.928	783.790	42.367	21.184	1313.378	63.551	21183.511
COLLECTORS	11958.303	4864.395	1317.440	749.927	40.537	20.268	1256.635	60.805	20268.311
FRONTAGE ROADS	7540.924	3067.494	830.780	472.905	25.562	12.781	792.436	38.344	12781.226
RAMPS	479.496	195.049	52.826	30.070	1.625	0.813	50.388	2.438	812.705
TOTALS	163717.788	66597.066	18036.705	10267.048	554.976	277.488	17204.242	832.463	277487.777

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	19.83	19.83	19.83	19.83	19.83	19.83	19.83	19.83
INTERSTATE HWYS & FW	54.14	54.14	54.14	54.14	54.14	54.14	54.14	54.14
MULTILANE HIGHWAYS	48.39	48.39	48.39	48.39	48.39	48.39	48.39	48.39
PRINCIPAL DIV. ART.	30.99	30.99	30.99	30.99	30.99	30.99	30.99	30.99
PRIN. UNDIV. ART.	33.55	33.55	33.55	33.55	33.55	33.55	33.55	33.55
MINOR DIV. ART.	34.18	34.18	34.18	34.18	34.18	34.18	34.18	34.18
MINOR UNDIV. ART.	30.92	30.92	30.92	30.92	30.92	30.92	30.92	30.92
COLLECTORS	30.58	30.58	30.58	30.58	30.58	30.58	30.58	30.58
FRONTAGE ROADS	31.12	31.12	31.12	31.12	31.12	31.12	31.12	31.12
RAMPS	41.67	41.67	41.67	41.67	41.67	41.67	41.67	41.67

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1682.9	741.1	234.3	195.9	2.2	1.5	285.9	29.2	3172.9
INTERSTATE HWYS & FW	2936.4	1388.9	435.6	291.6	3.6	2.5	468.0	82.6	5609.0
MULTILANE HIGHWAYS	698.8	323.1	101.6	68.2	0.8	0.6	110.1	17.9	1321.1
PRINCIPAL DIV. ART.	2278.9	1028.0	324.0	249.1	2.9	2.0	382.8	46.9	4314.6
PRIN. UNDIV. ART.	440.1	199.9	62.9	47.5	0.6	0.4	75.0	9.6	835.8
MINOR DIV. ART.	329.3	148.8	46.9	35.4	0.4	0.3	56.3	7.1	624.6
MINOR UNDIV. ART.	748.3	336.4	106.0	81.0	1.0	0.7	128.9	15.7	1418.0
COLLECTORS	705.8	317.1	99.9	77.2	0.9	0.6	121.3	14.6	1337.6
FRONTAGE ROADS	426.8	192.8	60.8	46.8	0.5	0.4	70.4	8.7	807.1
RAMPS	30.1	14.1	4.4	3.2	0.0	0.0	5.2	0.8	57.8
TOTALS	10277.3	4690.1	1476.4	1095.9	13.0	9.0	1704.0	233.0	19498.6
DIURNAL	354.6	153.3	11.1	57.2	0.0	0.0	0.0	89.7	665.9
ALL	10631.9	4843.4	1487.5	1153.1	13.0	9.0	1704.0	322.7	20164.5

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	17521.2	8008.1	2516.4	1737.8	6.3	3.5	1584.2	172.8	31550.4
INTERSTATE HWYS & FW	26299.2	13514.3	4265.7	3532.1	11.1	6.2	2773.7	385.4	50787.6
MULTILANE HIGHWAYS	6823.5	3401.5	1072.7	776.4	2.5	1.4	629.1	95.7	12802.8
PRINCIPAL DIV. ART.	21692.7	10257.3	3226.6	2221.0	8.0	4.5	2005.7	223.8	39639.6
PRIN. UNDIV. ART.	4042.4	1938.4	609.9	423.1	1.5	0.8	382.2	40.9	7439.2
MINOR DIV. ART.	3128.6	1494.1	470.0	325.2	1.2	0.6	291.4	30.9	5742.1
MINOR UNDIV. ART.	7188.6	3408.2	1071.9	722.5	2.6	1.5	657.7	69.7	13122.6
COLLECTORS	6812.7	3220.4	1012.8	689.4	2.5	1.4	626.5	66.6	12432.3
FRONTAGE ROADS	4006.0	1893.6	595.7	413.6	1.5	0.8	372.3	42.7	7326.2
RAMPS	242.4	122.3	38.6	29.6	0.1	0.1	26.2	2.6	461.9
TOTALS	97757.5	47258.2	14880.3	10870.6	37.3	20.8	9349.0	1131.1	181304.7

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1581.9	703.5	236.3	312.2	4.7	2.7	1050.8	5.1	3897.2
INTERSTATE HWYS & FW	7000.3	3103.9	1042.7	1397.8	20.0	11.3	4450.3	29.8	17056.0
MULTILANE HIGHWAYS	1444.9	645.4	216.8	278.7	4.0	2.3	899.4	6.0	3497.5
PRINCIPAL DIV. ART.	3014.0	1313.1	441.1	622.4	8.0	4.5	1781.1	11.2	7195.5
PRIN. UNDIV. ART.	643.2	278.4	93.5	135.8	1.7	0.9	371.8	2.5	1527.8
MINOR DIV. ART.	487.2	213.1	71.6	100.8	1.3	0.7	288.4	1.9	1164.9
MINOR UNDIV. ART.	1021.2	444.8	149.4	213.3	2.7	1.5	603.0	3.8	2439.7
COLLECTORS	929.5	404.3	135.8	195.9	2.5	1.4	559.7	3.4	2232.5
FRONTAGE ROADS	554.2	240.9	80.9	114.6	1.5	0.8	326.0	2.1	1320.9
RAMPS	56.3	24.0	8.1	12.6	0.1	0.1	32.3	0.2	133.7
TOTALS	16732.6	7371.3	2476.1	3384.1	46.5	26.3	10362.8	66.0	40465.8

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	208785.37	84929.64	23001.78	13093.32	707.75	353.87	21940.16	1061.62	353873.51
INTERSTATE HWYS & FW	712687.74	289906.88	78516.45	44693.98	2415.89	1207.95	74892.61	3623.84	1207945.33
MULTILANE HIGHWAYS	35749.73	14542.26	3938.53	2241.93	121.19	60.59	3756.75	181.78	60592.76
PRINCIPAL DIV. ART.	427887.84	174056.07	47140.19	26833.64	1450.47	725.23	44964.48	2175.70	725233.62
PRIN. UNDIV. ART.	146448.55	59572.29	16134.16	9184.06	496.44	248.22	15389.51	744.65	248217.88
MINOR DIV. ART.	12965.08	5273.93	1428.36	813.06	43.95	21.97	1362.43	65.92	21974.71
MINOR UNDIV. ART.	241504.49	98239.11	26606.43	15145.20	818.66	409.33	25378.44	1227.99	409329.64
COLLECTORS	55568.50	22604.13	6121.95	3484.80	188.37	94.18	5839.40	282.55	94183.89
FRONTAGE ROADS	69912.03	28438.79	7702.17	4384.31	236.99	118.49	7346.69	355.48	118494.96
RAMPS	8573.77	3487.64	944.57	537.68	29.06	14.53	900.97	43.60	14531.82
TOTALS	1920083.09	781050.75	211534.58	120411.99	6508.76	3254.38	201771.44	9763.13	3254378.12

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

VEHICLE HOURS

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	9524.885	3874.530	1049.352	597.323	32.288	16.144	1000.920	48.432	16143.874
INTERSTATE HWYS & FW	11524.963	4688.120	1269.699	722.752	39.068	19.534	1211.098	58.602	19533.835
MULTILANE HIGHWAYS	711.506	289.426	78.386	44.620	2.412	1.206	74.768	3.618	1205.943
PRINCIPAL DIV. ART.	15761.974	6411.650	1736.489	988.463	53.430	26.715	1656.343	80.146	26715.210
PRIN. UNDIV. ART.	3841.141	1562.498	423.177	240.885	13.021	6.510	403.645	19.531	6510.409
MINOR DIV. ART.	445.098	181.057	49.036	27.913	1.509	0.754	46.773	2.263	754.403
MINOR UNDIV. ART.	7714.322	3138.029	849.883	483.780	26.150	13.075	810.658	39.225	13075.122
COLLECTORS	1747.319	710.774	192.501	109.578	5.923	2.962	183.617	8.885	2961.557
FRONTAGE ROADS	1883.006	765.969	207.450	118.087	6.383	3.192	197.875	9.575	3191.536
RAMPS	199.723	81.243	22.003	12.525	0.677	0.339	20.988	1.016	338.513
TOTALS	53353.937	21703.296	5877.976	3345.925	180.861	90.430	5606.685	271.291	90430.402

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	23.02	23.02	23.02	23.02	23.02	23.02	23.02	23.02
INTERSTATE HWYS & FW	63.19	63.19	63.19	63.19	63.19	63.19	63.19	63.19
MULTILANE HIGHWAYS	52.62	52.62	52.62	52.62	52.62	52.62	52.62	52.62
PRINCIPAL DIV. ART.	32.79	32.79	32.79	32.79	32.79	32.79	32.79	32.79
PRIN. UNDIV. ART.	41.35	41.35	41.35	41.35	41.35	41.35	41.35	41.35
MINOR DIV. ART.	30.22	30.22	30.22	30.22	30.22	30.22	30.22	30.22
MINOR UNDIV. ART.	33.28	33.28	33.28	33.28	33.28	33.28	33.28	33.28
COLLECTORS	33.69	33.69	33.69	33.69	33.69	33.69	33.69	33.69
FRONTAGE ROADS	39.51	39.51	39.51	39.51	39.51	39.51	39.51	39.51
RAMPS	43.97	43.97	43.97	43.97	43.97	43.97	43.97	43.97

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	536.8	216.1	52.6	66.3	0.7	0.5	92.5	12.0	977.5
INTERSTATE HWYS & FW	1094.8	468.7	112.8	109.5	1.2	0.8	158.2	38.9	1984.9
MULTILANE HIGHWAYS	54.7	23.4	5.6	5.9	0.1	0.0	8.6	1.8	100.2
PRINCIPAL DIV. ART.	893.5	369.8	89.7	107.8	1.2	0.8	150.1	23.0	1635.9
PRIN. UNDIV. ART.	245.8	103.5	25.0	28.6	0.3	0.2	42.1	7.3	452.9
MINOR DIV. ART.	26.4	10.8	2.6	3.1	0.0	0.0	4.6	0.7	48.3
MINOR UNDIV. ART.	462.9	191.4	46.4	55.1	0.6	0.4	80.7	12.4	849.9
COLLECTORS	104.9	43.4	10.5	12.5	0.1	0.1	18.3	2.8	192.7
FRONTAGE ROADS	117.7	49.5	12.0	13.8	0.2	0.1	20.4	3.5	217.0
RAMPS	12.8	5.5	1.3	1.5	0.0	0.0	2.2	0.4	23.8
TOTALS	3550.2	1482.1	358.5	404.2	4.4	3.0	577.7	102.9	6483.2
DIURNAL	114.1	85.2	4.7	18.1	0.0	0.0	0.0	19.5	241.5
ALL	3664.3	1567.3	363.3	422.2	4.4	3.0	577.7	122.4	6724.7

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	5569.9	2377.9	584.1	577.1	2.0	1.1	490.0	56.5	9658.5
INTERSTATE HWYS & FW	11408.5	5375.0	1297.3	1575.0	4.2	2.3	1062.0	221.2	20945.6
MULTILANE HIGHWAYS	515.3	241.8	58.6	69.3	0.2	0.1	50.4	8.3	944.1
PRINCIPAL DIV. ART.	8340.8	3668.4	898.4	945.7	3.1	1.7	786.1	94.3	14738.5
PRIN. UNDIV. ART.	2183.4	996.1	243.4	272.8	0.9	0.5	218.9	25.4	3941.3
MINOR DIV. ART.	252.2	110.9	27.2	26.9	0.1	0.1	22.8	2.6	442.7
MINOR UNDIV. ART.	4302.3	1910.3	468.2	482.3	1.6	0.9	404.9	45.1	7615.4
COLLECTORS	965.6	430.0	105.4	109.2	0.4	0.2	91.7	10.2	1712.6
FRONTAGE ROADS	1028.7	468.9	114.6	126.5	0.4	0.2	103.3	11.5	1854.2
RAMPS	104.6	49.1	12.0	14.3	0.0	0.0	11.4	1.2	192.7
TOTALS	34671.3	15628.3	3809.1	4199.0	13.0	7.2	3241.5	476.2	62045.5

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE							MC	TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV		
LOCAL	576.7	233.0	62.5	121.2	1.6	0.9	355.5	2.0	1353.5
INTERSTATE HWYS & FW	2875.7	1196.6	320.1	547.7	8.8	4.9	1912.3	12.6	6878.6
MULTILANE HIGHWAYS	128.0	52.2	14.0	26.0	0.4	0.2	79.1	0.5	300.4
PRINCIPAL DIV. ART.	1238.1	490.9	131.6	269.2	3.3	1.8	713.2	4.8	2852.8
PRIN. UNDIV. ART.	454.8	181.4	48.6	98.4	1.2	0.7	262.2	1.9	1049.1
MINOR DIV. ART.	36.6	14.5	3.9	8.0	0.1	0.1	20.5	0.1	83.8
MINOR UNDIV. ART.	692.8	274.3	73.5	152.6	1.8	1.0	393.3	2.7	1592.0
COLLECTORS	158.7	62.7	16.8	35.2	0.4	0.2	90.1	0.6	364.7
FRONTAGE ROADS	209.8	83.0	22.2	46.3	0.5	0.3	118.6	0.8	481.6
RAMPS	25.9	10.2	2.7	5.9	0.1	0.0	14.8	0.1	59.6
TOTALS	6397.0	2598.7	695.9	1310.6	18.2	10.2	3959.5	26.1	15016.1

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	37640.88	21687.13	1869.58	623.19	124.64	124.64	186.96	62.32	62319.34
INTERSTATE HWYS & FW	74523.09	42937.14	3701.48	1233.83	246.77	246.77	370.15	123.38	123382.60
MULTILANE HIGHWAYS	14954.74	8616.31	742.79	247.60	49.52	49.52	74.28	24.76	24759.51
PRINCIPAL DIV. ART.	65145.75	37534.31	3235.72	1078.57	215.71	215.71	323.57	107.86	107857.20
PRIN. UNDIV. ART.	2907.39	1675.12	144.41	48.14	9.63	9.63	14.44	4.81	4813.56
MINOR DIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COLLECTORS	5105.94	2941.83	253.61	84.54	16.91	16.91	25.36	8.45	8453.54
FRONTAGE ROADS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAMPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	200277.79	115391.84	9947.57	3315.86	663.17	663.17	994.76	331.59	331585.75

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

VEHICLE HOURS

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1322.280	761.843	65.676	21.892	4.378	4.378	6.568	2.189	2189.205
INTERSTATE HWYS & FW	1108.028	638.400	55.034	18.345	3.669	3.669	5.503	1.834	1834.483
MULTILANE HIGHWAYS	242.810	139.897	12.060	4.020	0.804	0.804	1.206	0.402	402.003
PRINCIPAL DIV. ART.	1620.586	933.715	80.493	26.831	5.366	5.366	8.049	2.683	2683.089
PRIN. UNDIV. ART.	50.014	28.816	2.484	0.828	0.166	0.166	0.248	0.083	82.804
MINOR DIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MINOR UNDIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLLECTORS	104.024	59.934	5.167	1.722	0.344	0.344	0.517	0.172	172.225
FRONTAGE ROADS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RAMPS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	4447.741	2562.606	220.914	73.638	14.728	14.728	22.091	7.364	7363.809

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	28.66	28.66	28.66	28.66	28.66	28.66	28.66	28.66
INTERSTATE HWYS & FW	67.45	67.45	67.45	67.45	67.45	67.45	67.45	67.45
MULTILANE HIGHWAYS	61.69	61.69	61.69	61.69	61.69	61.69	61.69	61.69
PRINCIPAL DIV. ART.	42.14	42.14	42.14	42.14	42.14	42.14	42.14	42.14
PRIN. UNDIV. ART.	58.17	58.17	58.17	58.17	58.17	58.17	58.17	58.17
MINOR DIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COLLECTORS	49.09	49.09	49.09	49.09	49.09	49.09	49.09	49.09
FRONTAGE ROADS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAMPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	80.2	49.5	5.0	2.4	0.1	0.1	0.6	0.7	138.6
INTERSTATE HWYS & FW	124.6	80.3	8.1	2.9	0.1	0.2	0.8	1.5	218.5
MULTILANE HIGHWAYS	23.4	15.2	1.5	0.6	0.0	0.0	0.2	0.3	41.2
PRINCIPAL DIV. ART.	104.8	67.3	6.8	3.1	0.1	0.2	0.8	1.1	184.2
PRIN. UNDIV. ART.	4.2	2.8	0.3	0.1	0.0	0.0	0.0	0.0	7.4
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	6.9	4.6	0.5	0.2	0.0	0.0	0.1	0.1	12.3
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	344.2	219.6	22.2	9.3	0.4	0.5	2.5	3.6	602.2
DIURNAL	53.2	45.2	4.2	9.1	0.0	0.0	0.0	6.5	118.1
ALL	397.3	264.7	26.4	18.4	0.4	0.5	2.5	10.1	720.3

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	766.7	500.1	50.0	20.6	0.3	0.3	3.1	2.6	1343.7
INTERSTATE HWYS & FW	1425.7	1017.5	102.9	48.1	0.5	0.5	5.5	9.8	2610.5
MULTILANE HIGHWAYS	243.6	174.6	17.6	8.6	0.1	0.1	1.0	1.5	447.1
PRINCIPAL DIV. ART.	869.0	600.9	60.3	29.4	0.4	0.4	4.2	3.1	1567.6
PRIN. UNDIV. ART.	37.6	27.1	2.7	1.5	0.0	0.0	0.2	0.2	69.4
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	50.5	36.9	3.7	2.1	0.0	0.0	0.3	0.2	93.9
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	3393.2	2357.1	237.3	110.3	1.2	1.3	14.3	17.4	6132.1

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	108.3	64.6	6.9	6.0	0.3	0.3	2.7	0.1	189.2
INTERSTATE HWYS & FW	332.0	210.5	22.6	15.3	1.0	1.1	10.4	0.5	593.5
MULTILANE HIGHWAYS	62.6	39.3	4.2	3.0	0.2	0.2	1.9	0.1	111.4
PRINCIPAL DIV. ART.	201.1	119.2	12.8	11.5	0.5	0.6	5.2	0.3	351.1
PRIN. UNDIV. ART.	11.3	7.0	0.7	0.6	0.0	0.0	0.3	0.0	19.9
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	15.7	9.2	1.0	0.9	0.0	0.0	0.4	0.0	27.4
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	730.9	449.8	48.3	37.3	2.0	2.3	20.9	1.0	1292.6

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	814982.23	337893.78	87508.88	49371.72	2759.69	1442.17	81873.68	4014.90	1379847.05
INTERSTATE HWYS & FW	2748173.98	1130523.95	298256.24	168903.46	9309.99	4778.38	281330.07	13718.22	4654994.28
MULTILANE HIGHWAYS	456272.85	188135.54	49362.58	27923.48	1545.51	797.52	46450.08	2268.75	772756.30
PRINCIPAL DIV. ART.	1525040.82	631389.93	164071.61	92631.31	5164.51	2690.11	153736.27	7531.05	2582255.63
PRIN. UNDIV. ART.	369967.64	150987.76	40583.25	23067.17	1253.90	631.76	38586.87	1871.22	626949.57
MINOR DIV. ART.	175963.97	71578.56	19385.86	11035.03	596.49	298.24	18491.13	894.73	298244.02
MINOR UNDIV. ART.	595463.71	242222.53	65601.93	37342.64	2018.52	1009.26	62574.15	3027.78	1009260.53
COLLECTORS	386581.92	158118.50	42280.62	24007.61	1310.05	663.48	40112.67	1948.16	655023.00
FRONTAGE ROADS	259775.38	105671.34	28619.32	16291.00	880.59	440.30	27298.43	1320.89	440297.26
RAMPS	27853.59	11330.28	3068.62	1746.75	94.42	47.21	2926.99	141.63	47209.48
TOTALS	7360076.10	3027852.17	798738.91	452320.16	24933.67	12798.42	753380.34	36737.34	12466837.12

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

VEHICLE HOURS

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	41682.420	17179.527	4512.132	2552.952	141.192	72.785	4247.803	207.410	70596.222
INTERSTATE HWYS & FW	51245.037	21033.116	5578.603	3162.530	173.625	88.647	5274.138	256.768	86812.464
MULTILANE HIGHWAYS	10427.941	4283.001	1134.151	642.749	35.330	18.067	1071.508	52.191	17664.937
PRINCIPAL DIV. ART.	56915.869	23426.711	6172.346	3494.501	192.808	99.087	5818.740	283.846	96403.908
PRIN. UNDIV. ART.	11288.214	4600.287	1240.591	705.597	38.261	19.213	1181.212	57.226	19130.602
MINOR DIV. ART.	5834.599	2373.396	642.795	365.899	19.778	9.889	613.127	29.667	9889.150
MINOR UNDIV. ART.	20212.593	8222.072	2226.811	1267.569	68.517	34.259	2124.035	102.776	34258.632
COLLECTORS	13809.646	5635.103	1515.108	861.227	46.804	23.574	1440.768	69.862	23402.093
FRONTAGE ROADS	9423.930	3833.463	1038.230	590.992	31.946	15.973	990.311	47.918	15972.762
RAMPS	679.218	276.292	74.829	42.595	2.302	1.151	71.375	3.454	1151.218
TOTALS	221519.466	90862.969	24135.596	13686.611	750.564	382.646	22833.018	1111.118	375281.988

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	21.06	21.20	20.86	20.79	21.05	21.38	20.71	20.81
INTERSTATE HWYS & FW	56.85	56.97	56.69	56.63	56.84	57.12	56.57	56.65
MULTILANE HIGHWAYS	49.16	49.33	48.93	48.85	49.15	49.54	48.76	48.88
PRINCIPAL DIV. ART.	31.97	32.15	31.73	31.64	31.96	32.37	31.54	31.67
PRIN. UNDIV. ART.	36.83	36.90	36.74	36.71	36.83	36.99	36.67	36.72
MINOR DIV. ART.	33.89	33.89	33.89	33.89	33.89	33.89	33.89	33.89
MINOR UNDIV. ART.	31.88	31.88	31.88	31.88	31.88	31.88	31.88	31.88
COLLECTORS	31.27	31.37	31.14	31.10	31.27	31.49	31.04	31.11
FRONTAGE ROADS	33.38	33.38	33.38	33.38	33.38	33.38	33.38	33.38
RAMPS	42.38	42.38	42.38	42.38	42.38	42.38	42.38	42.38

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	2299.8	1006.7	291.9	264.5	3.0	2.1	379.1	41.9	4289.0
INTERSTATE HWYS & FW	4155.8	1937.9	556.6	404.0	4.9	3.5	626.9	122.9	7812.4
MULTILANE HIGHWAYS	776.9	361.7	108.8	74.7	0.9	0.7	118.8	20.0	1462.5
PRINCIPAL DIV. ART.	3277.2	1465.0	420.4	360.1	4.2	3.0	533.8	71.0	6134.7
PRIN. UNDIV. ART.	690.1	306.1	88.2	76.2	0.9	0.6	117.1	17.0	1296.1
MINOR DIV. ART.	355.7	159.7	49.5	38.5	0.5	0.3	60.9	7.8	672.9
MINOR UNDIV. ART.	1211.2	527.8	152.4	136.1	1.6	1.1	209.6	28.1	2267.9
COLLECTORS	817.6	365.1	110.9	89.9	1.1	0.7	139.7	17.5	1542.6
FRONTAGE ROADS	544.4	242.3	72.7	60.6	0.7	0.5	90.8	12.2	1024.2
RAMPS	42.9	19.6	5.7	4.7	0.1	0.0	7.5	1.2	81.7
TOTALS	14171.7	6391.8	1857.1	1509.4	17.8	12.5	2284.2	339.5	26584.0
DIURNAL	521.8	283.7	20.1	84.3	0.0	0.0	0.0	115.7	1025.5
ALL	14693.5	6675.4	1877.2	1593.7	17.8	12.5	2284.2	455.2	27609.5

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	23857.8	10886.1	3150.6	2335.5	8.5	4.9	2077.3	231.8	42552.5
INTERSTATE HWYS & FW	39133.5	19906.8	5665.9	5155.1	15.8	9.0	3841.2	616.4	74343.7
MULTILANE HIGHWAYS	7582.4	3817.9	1149.0	854.2	2.8	1.6	680.6	105.6	14194.0
PRINCIPAL DIV. ART.	30902.5	14526.6	4185.3	3196.1	11.5	6.6	2796.0	321.2	55945.8
PRIN. UNDIV. ART.	6263.4	2961.6	856.0	697.4	2.4	1.4	601.3	66.5	11449.9
MINOR DIV. ART.	3380.8	1605.0	497.2	352.0	1.3	0.7	314.3	33.5	6184.8
MINOR UNDIV. ART.	11490.8	5318.4	1540.0	1204.8	4.2	2.4	1062.6	114.7	20738.0
COLLECTORS	7828.9	3687.3	1121.8	800.8	2.9	1.6	718.5	77.0	14238.7
FRONTAGE ROADS	5034.7	2362.5	710.4	540.1	1.9	1.1	475.6	54.2	9180.4
RAMPS	347.1	171.4	50.5	43.9	0.1	0.1	37.6	3.8	654.5
TOTALS	135822.0	65243.6	18926.7	15179.9	51.4	29.3	12604.9	1624.7	249482.4

JORTS 2006 TRIPS ON 2006 NETWORK
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	2266.9	1001.1	305.7	439.4	6.6	3.9	1409.0	7.2	5439.9
INTERSTATE HWYS & FW	10207.9	4511.0	1385.4	1960.9	29.8	17.4	6373.0	42.8	24528.2
MULTILANE HIGHWAYS	1635.4	736.8	235.0	307.8	4.6	2.7	980.3	6.6	3909.2
PRINCIPAL DIV. ART.	4453.2	1923.3	585.5	903.1	11.8	6.9	2499.5	16.2	10399.4
PRIN. UNDIV. ART.	1109.3	466.8	142.9	234.7	2.9	1.7	634.3	4.3	2596.9
MINOR DIV. ART.	523.7	227.6	75.5	108.8	1.4	0.8	308.9	2.0	1248.7
MINOR UNDIV. ART.	1714.0	719.1	222.9	365.9	4.5	2.5	996.2	6.5	4031.7
COLLECTORS	1103.8	476.1	153.6	232.1	3.0	1.7	650.3	4.1	2624.6
FRONTAGE ROADS	764.0	323.9	103.1	160.9	2.0	1.1	444.5	2.9	1802.5
RAMPS	82.2	34.1	10.8	18.5	0.2	0.1	47.1	0.3	193.3
TOTALS	23860.5	10419.8	3220.3	4732.0	66.8	38.8	14343.1	93.0	56774.4

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	673166.77	273830.55	74162.44	42215.54	2281.92	1140.96	70739.56	3422.88	1140960.62
INTERSTATE HWYS & FW	2305961.24	938018.13	254046.58	144611.13	7816.82	3908.41	242321.35	11725.23	3908408.88
MULTILANE HIGHWAYS	398654.45	162164.52	43919.56	25000.36	1351.37	675.69	41892.50	2027.06	675685.51
PRINCIPAL DIV. ART.	1153139.48	469073.69	127040.79	72315.53	3908.95	1954.47	121177.37	5863.42	1954473.69
PRIN. UNDIV. ART.	295475.13	120193.27	32552.35	18529.80	1001.61	500.81	31049.93	1502.42	500805.31
MINOR DIV. ART.	139540.79	56762.36	15373.14	8750.86	473.02	236.51	14663.61	709.53	236509.82
MINOR UNDIV. ART.	571103.42	232313.26	62918.17	35814.96	1935.94	967.97	60014.26	2903.92	967971.90
COLLECTORS	437240.05	177860.36	48170.51	27420.14	1482.17	741.08	45947.26	2223.25	741084.83
FRONTAGE ROADS	262558.99	106803.66	28925.99	16465.56	890.03	445.02	27590.94	1335.05	445015.23
RAMPS	21832.64	8881.08	2405.29	1369.17	74.01	37.00	2294.28	111.01	37004.48
TOTALS	6258672.96	2545900.86	689514.82	392493.05	21215.84	10607.92	657691.06	31823.76	10607920.27

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

VEHICLE HOURS

COUNTY: JEFFERSON

VEHICLE TYPE

ROADWAY TYPE	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	TOTALS
LOCAL	36550.567	14868.027	4026.757	2292.154	123.900	61.950	3840.907	185.850	61950.113
INTERSTATE HWYS & FW	49437.274	20110.077	5446.479	3100.304	167.584	83.792	5195.103	251.376	83791.989
MULTILANE HIGHWAYS	9151.237	3722.537	1008.187	573.891	31.021	15.511	961.655	46.532	15510.572
PRINCIPAL DIV. ART.	55615.922	22623.426	6127.178	3487.778	188.529	94.264	5844.385	282.793	94264.274
PRIN. UNDIV. ART.	11077.504	4506.103	1220.403	694.691	37.551	18.775	1164.077	56.326	18775.431
MINOR DIV. ART.	5772.314	2348.060	635.933	361.993	19.567	9.784	606.582	29.351	9783.583
MINOR UNDIV. ART.	20734.981	8434.569	2284.362	1300.329	70.288	35.144	2178.930	105.432	35144.036
COLLECTORS	16887.395	6869.449	1860.476	1059.040	57.245	28.623	1774.608	85.868	28622.704
FRONTAGE ROADS	11724.199	4769.166	1291.649	735.246	39.743	19.872	1232.035	59.615	19871.524
RAMPS	594.895	241.991	65.539	37.307	2.017	1.008	62.514	3.025	1008.297
TOTALS	217546.289	88493.406	23966.964	13642.733	737.445	368.723	22860.796	1106.168	368722.523

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	19.80	19.80	19.80	19.80	19.80	19.80	19.80	19.80
INTERSTATE HWYS & FW	52.00	52.00	52.00	52.00	52.00	52.00	52.00	52.00
MULTILANE HIGHWAYS	50.40	50.40	50.40	50.40	50.40	50.40	50.40	50.40
PRINCIPAL DIV. ART.	27.51	27.51	27.51	27.51	27.51	27.51	27.51	27.51
PRIN. UNDIV. ART.	30.53	30.53	30.53	30.53	30.53	30.53	30.53	30.53
MINOR DIV. ART.	25.15	25.15	25.15	25.15	25.15	25.15	25.15	25.15
MINOR UNDIV. ART.	31.42	31.42	31.42	31.42	31.42	31.42	31.42	31.42
COLLECTORS	29.78	29.78	29.78	29.78	29.78	29.78	29.78	29.78
FRONTAGE ROADS	29.33	29.33	29.33	29.33	29.33	29.33	29.33	29.33
RAMPS	40.19	40.19	40.19	40.19	40.19	40.19	40.19	40.19

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1810.6	831.9	259.8	199.6	2.6	1.8	335.2	32.5	3474.1
INTERSTATE HWYS & FW	3227.0	1578.9	490.1	300.1	4.5	3.1	571.5	91.6	6266.9
MULTILANE HIGHWAYS	608.8	293.8	91.3	55.0	0.8	0.6	104.5	16.5	1171.4
PRINCIPAL DIV. ART.	2720.2	1273.0	397.0	287.6	3.8	2.6	482.8	53.3	5220.2
PRIN. UNDIV. ART.	580.6	273.2	85.1	59.2	0.8	0.6	107.6	12.5	1119.6
MINOR DIV. ART.	306.3	141.7	44.2	31.4	0.4	0.3	57.1	6.1	587.5
MINOR UNDIV. ART.	1106.8	520.0	161.9	112.9	1.6	1.1	207.0	23.9	2135.3
COLLECTORS	889.6	416.3	129.7	91.6	1.3	0.9	165.7	18.7	1713.8
FRONTAGE ROADS	576.7	271.5	84.6	60.5	0.8	0.6	102.8	11.8	1109.1
RAMPS	32.7	15.9	4.9	3.3	0.0	0.0	6.2	0.8	63.9
TOTALS	11859.4	5616.0	1748.7	1201.2	16.8	11.7	2140.3	267.8	22861.8
DIURNAL	287.3	108.6	7.6	40.9	0.0	0.0	0.0	116.6	561.0
ALL	12146.7	5724.6	1756.3	1242.1	16.8	11.7	2140.3	384.3	23422.8

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	20100.1	9401.7	2923.1	1688.3	7.5	4.2	1863.1	200.4	36188.5
INTERSTATE HWYS & FW	29645.5	15367.3	4778.0	3458.5	13.5	7.6	3343.9	441.5	57055.8
MULTILANE HIGHWAYS	6040.5	3070.7	954.7	633.8	2.5	1.4	614.4	91.8	11409.8
PRINCIPAL DIV. ART.	28186.1	13380.1	4160.1	2455.6	10.8	6.0	2669.0	311.0	51178.8
PRIN. UNDIV. ART.	5832.3	2827.7	879.2	506.4	2.3	1.3	557.0	60.3	10666.4
MINOR DIV. ART.	3289.6	1569.7	488.1	264.3	1.2	0.7	295.0	31.4	5939.9
MINOR UNDIV. ART.	11191.7	5432.0	1688.9	980.6	4.4	2.4	1075.2	113.1	20488.2
COLLECTORS	9150.4	4411.8	1371.7	789.0	3.5	2.0	867.4	92.3	16688.2
FRONTAGE ROADS	5789.2	2772.5	862.0	513.4	2.3	1.3	558.8	64.8	10564.5
RAMPS	285.0	145.4	45.2	29.4	0.1	0.1	31.5	3.1	539.8
TOTALS	119510.5	58378.9	18151.1	11319.3	48.1	26.9	11875.3	1409.8	220719.8

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1771.2	807.4	266.8	337.9	5.5	3.2	1056.3	6.1	4254.3
INTERSTATE HWYS & FW	7568.2	3417.9	1129.4	1482.3	22.6	12.9	4321.9	33.9	17989.2
MULTILANE HIGHWAYS	1357.3	620.8	205.1	254.1	4.0	2.3	768.8	6.0	3218.6
PRINCIPAL DIV. ART.	3175.1	1424.5	470.7	618.2	9.2	5.3	1765.1	12.0	7480.1
PRIN. UNDIV. ART.	802.9	356.2	117.7	162.3	2.2	1.3	422.4	3.2	1868.2
MINOR DIV. ART.	369.3	165.8	54.8	73.3	1.0	0.6	199.7	1.4	866.0
MINOR UNDIV. ART.	1556.4	692.1	228.7	316.0	4.4	2.5	835.9	6.1	3642.1
COLLECTORS	1178.2	524.7	173.4	238.8	3.4	1.9	641.6	4.6	2766.5
FRONTAGE ROADS	719.2	319.7	105.6	142.9	2.0	1.2	387.4	2.8	1680.8
RAMPS	60.2	26.2	8.7	12.9	0.2	0.1	31.2	0.3	139.6
TOTALS	18558.1	8355.2	2760.9	3638.8	54.7	31.2	10430.3	76.3	43905.4

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	246648.83	100331.73	27173.18	15467.81	836.10	418.05	25919.03	1254.15	418048.87
INTERSTATE HWYS & FW	805593.98	327699.24	88751.88	50520.30	2730.83	1365.41	84655.64	4096.24	1365413.52
MULTILANE HIGHWAYS	148452.69	60387.54	16354.96	9309.75	503.23	251.61	15600.11	754.84	251614.73
PRINCIPAL DIV. ART.	339209.68	137983.60	37370.56	21272.47	1149.86	574.93	35645.76	1724.79	574931.66
PRIN. UNDIV. ART.	199828.95	81286.35	22015.05	12531.65	677.39	338.69	20998.97	1016.08	338693.14
MINOR DIV. ART.	16226.44	6600.59	1787.66	1017.59	55.00	27.50	1705.15	82.51	27502.44
MINOR UNDIV. ART.	315503.07	128340.23	34758.81	19785.79	1069.50	534.75	33154.56	1604.25	534750.97
COLLECTORS	85321.00	34706.85	9399.77	5350.64	289.22	144.61	8965.94	433.84	144611.86
FRONTAGE ROADS	116082.90	47220.16	12788.79	7279.78	393.50	196.75	12198.54	590.25	196750.68
RAMPS	13102.83	5329.96	1443.53	821.70	44.42	22.21	1376.91	66.62	22208.18
TOTALS	2285970.37	929886.25	251844.19	143357.46	7749.05	3874.53	240220.62	11623.58	3874526.05

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

VEHICLE HOURS

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	11250.376	4576.424	1239.448	705.532	38.137	19.068	1182.243	57.205	19068.435
INTERSTATE HWYS & FW	14276.228	5807.279	1572.805	895.289	48.394	24.197	1500.214	72.591	24196.996
MULTILANE HIGHWAYS	4509.877	1834.526	496.851	282.823	15.288	7.644	473.919	22.932	7643.859
PRINCIPAL DIV. ART.	13791.296	5610.019	1519.380	864.878	46.750	23.375	1449.255	70.125	23375.078
PRIN. UNDIV. ART.	6260.827	2546.777	689.752	392.628	21.223	10.612	657.917	31.835	10611.572
MINOR DIV. ART.	562.501	228.814	61.970	35.275	1.907	0.953	59.110	2.860	953.392
MINOR UNDIV. ART.	10314.997	4195.931	1136.398	646.873	34.966	17.483	1083.949	52.449	17483.045
COLLECTORS	2746.056	1117.040	302.532	172.210	9.309	4.654	288.569	13.963	4654.332
FRONTAGE ROADS	3665.356	1490.992	403.810	229.861	12.425	6.212	385.173	18.637	6212.468
RAMPS	329.427	134.004	36.293	20.659	1.117	0.558	34.618	1.675	558.351
TOTALS	67706.942	27541.807	7459.239	4246.029	229.515	114.758	7114.967	344.273	114757.529

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	23.03	23.03	23.03	23.03	23.03	23.03	23.03	23.03
INTERSTATE HWYS & FW	60.23	60.23	60.23	60.23	60.23	60.23	60.23	60.23
MULTILANE HIGHWAYS	39.51	39.51	39.51	39.51	39.51	39.51	39.51	39.51
PRINCIPAL DIV. ART.	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
PRIN. UNDIV. ART.	38.12	38.12	38.12	38.12	38.12	38.12	38.12	38.12
MINOR DIV. ART.	29.88	29.88	29.88	29.88	29.88	29.88	29.88	29.88
MINOR UNDIV. ART.	32.63	32.63	32.63	32.63	32.63	32.63	32.63	32.63
COLLECTORS	33.07	33.07	33.07	33.07	33.07	33.07	33.07	33.07
FRONTAGE ROADS	38.30	38.30	38.30	38.30	38.30	38.30	38.30	38.30
RAMPS	44.28	44.28	44.28	44.28	44.28	44.28	44.28	44.28

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	591.6	241.6	68.1	65.6	0.9	0.6	108.5	13.4	1090.2
INTERSTATE HWYS & FW	1158.9	499.1	140.3	103.5	1.5	1.0	184.5	40.7	2129.4
MULTILANE HIGHWAYS	262.2	110.7	31.1	27.1	0.4	0.3	46.9	7.4	486.1
PRINCIPAL DIV. ART.	705.6	295.2	83.1	77.1	1.0	0.7	126.1	17.6	1306.4
PRIN. UNDIV. ART.	348.7	147.6	41.5	36.9	0.5	0.3	63.3	9.7	648.6
MINOR DIV. ART.	31.0	12.9	3.6	3.3	0.0	0.0	5.7	0.8	57.4
MINOR UNDIV. ART.	571.7	239.5	67.4	60.4	0.8	0.6	106.5	15.3	1062.2
COLLECTORS	152.6	64.0	18.0	16.1	0.2	0.2	28.5	4.1	283.6
FRONTAGE ROADS	199.6	84.9	23.9	21.2	0.3	0.2	36.2	5.6	371.9
RAMPS	19.1	8.3	2.3	2.0	0.0	0.0	3.5	0.6	35.8
TOTALS	4041.1	1703.6	479.4	413.1	5.6	3.8	709.6	115.4	7471.6
DIURNAL	97.5	56.2	3.8	13.4	0.0	0.0	0.0	30.8	201.6
ALL	4138.5	1759.7	483.2	426.5	5.6	3.8	709.6	146.2	7673.2

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE							MC	TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV		
LOCAL	6498.3	2760.9	778.6	540.2	2.3	1.3	590.3	65.5	11237.4
INTERSTATE HWYS & FW	11877.8	5513.6	1554.9	1382.0	4.9	2.7	1227.3	227.6	21790.9
MULTILANE HIGHWAYS	2623.5	1166.3	328.9	255.2	1.0	0.6	261.3	33.9	4670.6
PRINCIPAL DIV. ART.	7076.9	3065.7	864.6	641.2	2.7	1.5	688.1	80.0	12420.8
PRIN. UNDIV. ART.	3354.0	1492.0	420.8	330.5	1.4	0.8	345.0	39.0	5983.3
MINOR DIV. ART.	313.6	137.2	38.7	26.9	0.1	0.1	29.4	3.2	549.1
MINOR UNDIV. ART.	5633.1	2484.8	700.7	508.1	2.2	1.2	549.9	59.1	9939.2
COLLECTORS	1495.5	661.1	186.4	135.8	0.6	0.3	146.9	15.7	2642.4
FRONTAGE ROADS	1865.9	833.1	234.9	187.8	0.8	0.4	196.5	21.8	3341.3
RAMPS	165.3	76.5	21.6	18.6	0.1	0.0	18.9	2.1	303.0
TOTALS	40904.0	18191.2	5130.1	4026.2	16.1	8.8	4053.6	547.9	72878.0

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	661.7	266.4	81.0	129.7	1.9	1.1	364.1	2.3	1508.3
INTERSTATE HWYS & FW	3027.6	1248.3	379.4	551.6	9.4	5.3	1784.2	13.6	7019.3
MULTILANE HIGHWAYS	457.8	183.7	55.8	89.1	1.3	0.7	245.3	1.9	1035.7
PRINCIPAL DIV. ART.	942.1	372.3	113.1	189.7	2.6	1.5	491.0	3.6	2116.0
PRIN. UNDIV. ART.	588.4	233.5	71.0	118.7	1.6	0.9	308.7	2.4	1325.3
MINOR DIV. ART.	44.4	17.5	5.3	9.0	0.1	0.1	22.3	0.2	99.0
MINOR UNDIV. ART.	875.9	345.2	104.9	179.6	2.3	1.3	444.8	3.5	1957.5
COLLECTORS	235.9	92.8	28.2	48.7	0.6	0.4	120.3	0.9	527.8
FRONTAGE ROADS	338.3	133.5	40.6	69.0	0.9	0.5	174.9	1.4	759.0
RAMPS	39.0	15.3	4.7	8.1	0.1	0.1	20.3	0.2	87.8
TOTALS	7211.2	2908.6	884.0	1393.3	20.9	11.7	3976.0	30.1	16435.7

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	44368.89	25563.53	2203.75	734.58	146.92	146.92	220.38	73.46	73458.42
INTERSTATE HWYS & FW	32605.86	18786.16	1619.50	539.83	107.97	107.97	161.95	53.98	53983.22
MULTILANE HIGHWAYS	36989.45	21311.80	1837.22	612.41	122.48	122.48	183.72	61.24	61240.81
PRINCIPAL DIV. ART.	114761.79	66121.03	5700.09	1900.03	380.01	380.01	570.01	190.00	190002.96
PRIN. UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR DIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COLLECTORS	8517.97	4907.70	423.08	141.03	28.21	28.21	42.31	14.10	14102.60
FRONTAGE ROADS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAMPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	237243.96	136690.23	11783.64	3927.88	785.58	785.58	1178.36	392.79	392788.01

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

VEHICLE HOURS

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1558.623	898.015	77.415	25.805	5.161	5.161	7.742	2.581	2580.501
INTERSTATE HWYS & FW	498.013	286.935	24.736	8.245	1.649	1.649	2.474	0.825	824.525
MULTILANE HIGHWAYS	738.455	425.467	36.678	12.226	2.445	2.445	3.668	1.223	1222.607
PRINCIPAL DIV. ART.	2815.777	1622.335	139.856	46.619	9.324	9.324	13.986	4.662	4661.882
PRIN. UNDIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MINOR DIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MINOR UNDIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLLECTORS	174.876	100.757	8.686	2.895	0.579	0.579	0.869	0.290	289.530
FRONTAGE ROADS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RAMPS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	5785.744	3333.508	287.371	95.790	19.158	19.158	28.737	9.579	9579.047

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	28.66	28.66	28.66	28.66	28.66	28.66	28.66	28.66
INTERSTATE HWYS & FW	65.55	65.55	65.55	65.55	65.55	65.55	65.55	65.55
MULTILANE HIGHWAYS	52.22	52.22	52.22	52.22	52.22	52.22	52.22	52.22
PRINCIPAL DIV. ART.	44.53	44.53	44.53	44.53	44.53	44.53	44.53	44.53
PRIN. UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR DIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COLLECTORS	48.72	48.72	48.72	48.72	48.72	48.72	48.72	48.72
FRONTAGE ROADS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAMPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	87.9	54.7	5.6	2.5	0.1	0.2	0.8	0.8	152.5
INTERSTATE HWYS & FW	50.2	32.1	3.3	1.1	0.1	0.1	0.3	0.6	87.8
MULTILANE HIGHWAYS	53.4	34.6	3.5	1.4	0.1	0.1	0.4	0.6	94.1
PRINCIPAL DIV. ART.	172.3	111.4	11.4	4.8	0.2	0.3	1.5	1.9	303.9
PRIN. UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	10.7	7.1	0.7	0.3	0.0	0.0	0.1	0.1	19.1
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	374.5	239.9	24.6	10.1	0.5	0.7	3.1	4.1	657.4
DIURNAL	44.9	35.2	3.4	8.1	0.0	0.0	0.0	11.7	103.3
ALL	419.4	275.1	28.0	18.2	0.5	0.7	3.1	15.7	760.7

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	888.7	574.5	58.2	19.9	0.3	0.3	3.6	3.0	1548.6
INTERSTATE HWYS & FW	569.7	388.8	39.4	17.0	0.2	0.2	2.3	4.2	1021.9
MULTILANE HIGHWAYS	507.0	349.9	35.5	15.1	0.2	0.2	2.3	2.8	913.1
PRINCIPAL DIV. ART.	1526.6	1041.1	105.5	45.0	0.7	0.7	7.5	6.0	2733.1
PRIN. UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	80.4	58.0	5.9	2.9	0.0	0.0	0.5	0.3	148.1
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	3572.4	2412.3	244.5	99.9	1.4	1.6	16.3	16.3	6364.8

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	124.0	72.9	7.9	6.5	0.3	0.4	2.8	0.2	215.0
INTERSTATE HWYS & FW	138.8	86.7	9.4	6.2	0.4	0.5	4.0	0.2	246.2
MULTILANE HIGHWAYS	129.4	77.9	8.5	6.5	0.4	0.4	3.3	0.2	226.5
PRINCIPAL DIV. ART.	357.4	210.5	22.9	19.1	0.9	1.1	8.6	0.5	621.0
PRIN. UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	25.3	14.5	1.6	1.5	0.1	0.1	0.6	0.0	43.6
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	775.0	462.5	50.2	39.8	2.1	2.4	19.2	1.1	1352.3

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	964184.48	399725.81	103539.37	58417.94	3264.94	1705.93	96878.96	4750.49	1632467.91
INTERSTATE HWYS & FW	3144161.08	1284503.54	344417.95	195671.26	10655.61	5381.79	327138.94	15875.45	5327805.62
MULTILANE HIGHWAYS	584096.59	243863.86	62111.74	34922.52	1977.08	1049.78	57676.34	2843.14	988541.05
PRINCIPAL DIV. ART.	1607110.94	673178.31	170111.44	95488.03	5438.82	2909.41	157393.14	7778.22	2719408.31
PRIN. UNDIV. ART.	495304.09	201479.63	54567.40	31061.44	1679.00	839.50	52048.90	2518.50	839498.45
MINOR DIV. ART.	155767.23	63362.94	17160.80	9768.45	528.02	264.01	16368.76	792.04	264012.26
MINOR UNDIV. ART.	886606.49	360653.49	97676.99	55600.75	3005.45	1502.72	93168.82	4508.17	1502722.87
COLLECTORS	531079.02	217474.91	57993.36	32911.80	1799.60	913.90	54955.50	2671.19	899799.29
FRONTAGE ROADS	378641.89	154023.82	41714.78	23745.34	1283.53	641.77	39789.49	1925.30	641765.91
RAMPS	34935.47	14211.04	3848.82	2190.87	118.43	59.21	3671.18	177.64	59212.66
TOTALS	8781887.29	3612477.34	953142.65	539778.39	29750.47	15268.02	899090.04	43840.13	14875234.33

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

VEHICLE HOURS

COUNTY: ALL COUNTIES

VEHICLE TYPE

ROADWAY TYPE	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	TOTALS
LOCAL	49359.566	20342.466	5343.621	3023.491	167.198	86.180	5030.891	245.636	83599.049
INTERSTATE HWYS & FW	64211.515	26204.291	7044.020	4003.838	217.627	109.638	6697.791	324.791	108813.510
MULTILANE HIGHWAYS	14399.569	5982.531	1541.716	868.940	48.754	25.600	1439.243	70.686	24377.038
PRINCIPAL DIV. ART.	72222.995	29855.780	7786.414	4399.275	244.602	126.963	7307.626	357.580	122301.235
PRIN. UNDIV. ART.	17338.332	7052.881	1910.155	1087.319	58.774	29.387	1821.994	88.161	29387.003
MINOR DIV. ART.	6334.815	2576.874	697.903	397.268	21.474	10.737	665.692	32.211	10736.975
MINOR UNDIV. ART.	31049.978	12630.500	3420.760	1947.202	105.254	52.627	3262.879	157.881	52627.082
COLLECTORS	19808.328	8087.245	2171.693	1234.146	67.133	33.856	2064.045	100.121	33566.566
FRONTAGE ROADS	15389.556	6260.158	1695.460	965.108	52.168	26.084	1617.208	78.252	26083.992
RAMPS	924.322	375.996	101.832	57.966	3.133	1.567	97.132	4.700	1566.648
TOTALS	291038.975	119368.721	31713.575	17984.552	986.118	502.638	30004.500	1460.019	493059.099

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HOGV	LDDV	LDDT	HDDV	MC
LOCAL	21.04	21.18	20.84	20.77	21.03	21.36	20.69	20.79
INTERSTATE HWYS & FW	54.25	54.30	54.18	54.16	54.25	54.36	54.14	54.17
MULTILANE HIGHWAYS	47.75	47.86	47.58	47.53	47.74	48.00	47.46	47.55
PRINCIPAL DIV. ART.	29.35	29.79	28.73	28.51	29.33	30.32	28.24	28.59
PRIN. UNDIV. ART.	33.59	33.59	33.59	33.59	33.59	33.59	33.59	33.59
MINOR DIV. ART.	25.64	25.64	25.64	25.64	25.64	25.64	25.64	25.64
MINOR UNDIV. ART.	31.85	31.85	31.85	31.85	31.85	31.85	31.85	31.85
COLLECTORS	30.61	30.73	30.45	30.39	30.60	30.88	30.33	30.41
FRONTAGE ROADS	32.08	32.08	32.08	32.08	32.08	32.08	32.08	32.08
RAMPS	41.72	41.72	41.72	41.72	41.72	41.72	41.72	41.72

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	2490.1	1128.2	333.5	267.8	3.6	2.6	444.4	46.6	4716.8
INTERSTATE HWYS & FW	4436.2	2110.0	633.7	404.7	6.0	4.2	756.4	133.0	8484.1
MULTILANE HIGHWAYS	924.5	439.0	126.0	83.5	1.3	0.9	151.8	24.6	1751.6
PRINCIPAL DIV. ART.	3598.1	1679.5	491.5	369.5	5.0	3.6	610.4	72.8	6830.5
PRIN. UNDIV. ART.	929.4	420.8	126.6	96.0	1.3	0.9	170.9	22.2	1768.2
MINOR DIV. ART.	337.2	154.5	47.8	34.7	0.5	0.3	62.8	6.9	644.9
MINOR UNDIV. ART.	1678.5	759.5	229.3	173.3	2.5	1.7	313.4	39.3	3197.5
COLLECTORS	1052.9	487.4	148.4	108.0	1.5	1.1	194.2	22.9	2016.5
FRONTAGE ROADS	776.3	356.4	108.5	81.7	1.1	0.8	138.9	17.4	1481.0
RAMPS	51.8	24.2	7.3	5.2	0.1	0.1	9.7	1.4	99.7
TOTALS	16274.9	7559.5	2252.7	1624.4	22.9	16.2	2853.0	387.2	30990.9
DIURNAL	429.7	199.9	14.8	62.4	0.0	0.0	0.0	159.1	865.9
ALL	16704.6	7759.4	2267.5	1686.9	22.9	16.2	2853.0	546.2	31856.7

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	27487.1	12737.0	3760.0	2248.4	10.2	5.9	2457.0	268.8	48974.4
INTERSTATE HWYS & FW	42093.0	21269.8	6372.3	4857.5	18.6	10.5	4573.6	673.3	79868.6
MULTILANE HIGHWAYS	9171.1	4586.9	1319.1	904.1	3.7	2.2	878.0	128.5	16993.5
PRINCIPAL DIV. ART.	36789.6	17486.9	5130.2	3141.8	14.2	8.3	3364.6	397.0	66332.6
PRIN. UNDIV. ART.	9186.3	4319.7	1300.0	836.8	3.6	2.0	902.0	99.4	16649.7
MINOR DIV. ART.	3603.1	1706.9	526.7	291.2	1.3	0.7	324.4	34.6	6489.1
MINOR UNDIV. ART.	16824.8	7916.8	2389.6	1488.7	6.5	3.6	1625.1	172.2	30427.4
COLLECTORS	10726.4	5131.0	1564.0	927.7	4.1	2.3	1014.8	108.3	19478.7
FRONTAGE ROADS	7655.2	3605.6	1097.0	701.2	3.0	1.7	755.3	86.7	13905.7
RAMPS	450.3	221.9	66.8	47.9	0.2	0.1	50.4	5.2	842.8
TOTALS	163986.9	78982.4	23525.7	15445.4	65.6	37.3	15945.2	1974.1	299962.6

JORTS 2016 TRIPS ON 1993 NETWORK - (NO BUILD)
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	2557.0	1146.7	355.7	474.1	7.8	4.6	1423.2	8.6	5977.6
INTERSTATE HWYS & FW	10734.5	4752.9	1518.2	2040.1	32.5	18.7	6110.0	47.7	25254.6
MULTILANE HIGHWAYS	1944.6	882.4	269.4	349.7	5.7	3.4	1017.4	8.1	4480.8
PRINCIPAL DIV. ART.	4474.7	2007.3	606.7	827.0	12.8	7.8	2264.7	16.2	10217.1
PRIN. UNDIV. ART.	1391.4	589.7	188.7	281.0	3.8	2.2	731.1	5.6	3193.5
MINOR DIV. ART.	413.7	183.4	60.1	82.4	1.2	0.7	222.0	1.5	965.0
MINOR UNDIV. ART.	2432.3	1037.2	333.6	495.6	6.7	3.8	1280.7	9.6	5599.6
COLLECTORS	1439.3	632.0	203.1	289.0	4.1	2.3	762.6	5.5	3338.0
FRONTAGE ROADS	1057.5	453.1	146.2	211.9	3.0	1.7	562.3	4.2	2439.8
RAMPS	99.2	41.5	13.3	21.1	0.3	0.2	51.4	0.4	227.4
TOTALS	26544.3	11726.3	3695.0	5071.8	77.7	45.3	14425.6	107.4	61693.4

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	668483.82	271925.62	73646.52	41921.87	2266.05	1133.02	70247.45	3399.07	1133023.42
INTERSTATE HWYS & FW	2259111.16	918960.47	248885.13	141673.07	7658.00	3829.00	237398.12	11487.01	3829001.96
MULTILANE HIGHWAYS	459294.16	186831.52	50600.20	28803.19	1556.93	778.46	48264.81	2335.39	778464.67
PRINCIPAL DIV. ART.	1252649.05	509552.16	138003.71	78555.96	4246.27	2123.13	131634.31	6369.40	2123133.98
PRIN. UNDIV. ART.	272511.34	110852.07	30022.44	17089.69	923.77	461.88	28636.78	1385.65	461883.62
MINOR DIV. ART.	139757.29	56850.42	15396.99	8764.44	473.75	236.88	14686.36	710.63	236876.76
MINOR UNDIV. ART.	570631.79	232121.41	62866.21	35785.38	1934.35	967.17	59964.70	2901.52	967172.53
COLLECTORS	380440.36	154755.40	41912.92	23858.12	1289.63	644.81	39978.48	1934.44	644814.17
FRONTAGE ROADS	193593.18	78749.77	21328.06	12140.59	656.25	328.12	20343.69	984.37	328124.04
RAMPS	22953.35	9336.96	2528.76	1439.45	77.81	38.90	2412.05	116.71	38903.99
TOTALS	6219425.49	2529935.79	685190.94	390031.77	21082.80	10541.40	653566.75	31624.20	10541399.14

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

VEHICLE HOURS

COUNTY: JEFFERSON

	VEHICLE TYPE								
ROADWAY TYPE	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	TOTALS
LOCAL	36292.478	14763.042	3998.324	2275.969	123.025	61.513	3813.786	184.538	61512.675
INTERSTATE HWYS & FW	45100.055	18345.785	4968.650	2828.309	152.882	76.441	4739.328	229.322	76440.771
MULTILANE HIGHWAYS	10506.344	4273.767	1157.479	658.872	35.615	17.807	1104.057	53.422	17807.363
PRINCIPAL DIV. ART.	53598.495	21802.778	5904.919	3361.262	181.690	90.845	5632.384	272.535	90844.907
PRIN. UNDIV. ART.	9781.319	3978.842	1077.603	613.405	33.157	16.579	1027.867	49.736	16578.507
MINOR DIV. ART.	5194.708	2113.101	572.298	325.770	17.609	8.805	545.885	26.414	8804.589
MINOR UNDIV. ART.	19003.713	7730.324	2093.629	1191.758	64.419	32.210	1997.000	96.629	32209.682
COLLECTORS	14246.450	5795.166	1569.524	893.421	48.293	24.147	1497.085	72.440	24146.525
FRONTAGE ROADS	8671.272	3527.297	955.310	543.792	29.394	14.697	911.218	44.091	14697.070
RAMPS	616.016	250.583	67.866	38.632	2.088	1.044	64.734	3.132	1044.096
TOTALS	203010.850	82580.685	22365.602	12731.189	688.172	344.086	21333.344	1032.259	344086.187

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	19.82	19.82	19.82	19.82	19.82	19.82	19.82	19.82
INTERSTATE HWYS & FW	54.03	54.03	54.03	54.03	54.03	54.03	54.03	54.03
MULTILANE HIGHWAYS	49.64	49.64	49.64	49.64	49.64	49.64	49.64	49.64
PRINCIPAL DIV. ART.	29.30	29.30	29.30	29.30	29.30	29.30	29.30	29.30
PRIN. UNDIV. ART.	32.91	32.91	32.91	32.91	32.91	32.91	32.91	32.91
MINOR DIV. ART.	29.96	29.96	29.96	29.96	29.96	29.96	29.96	29.96
MINOR UNDIV. ART.	33.62	33.62	33.62	33.62	33.62	33.62	33.62	33.62
COLLECTORS	30.14	30.14	30.14	30.14	30.14	30.14	30.14	30.14
FRONTAGE ROADS	28.38	28.38	28.38	28.38	28.38	28.38	28.38	28.38
RAMPS	40.31	40.31	40.31	40.31	40.31	40.31	40.31	40.31

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1797.6	826.0	257.9	198.2	2.6	1.8	332.8	32.2	3449.1
INTERSTATE HWYS & FW	3080.6	1510.9	469.0	280.0	4.2	2.9	538.5	89.8	5976.0
MULTILANE HIGHWAYS	711.9	341.9	106.3	63.5	1.0	0.7	121.8	19.2	1366.2
PRINCIPAL DIV. ART.	2707.9	1270.5	396.0	281.7	3.8	2.7	489.8	55.5	5208.0
PRIN. UNDIV. ART.	515.6	243.8	75.9	52.4	0.7	0.5	95.2	11.4	995.5
MINOR DIV. ART.	281.4	131.3	40.9	28.5	0.4	0.3	52.5	5.9	541.2
MINOR UNDIV. ART.	1037.3	489.7	152.4	104.6	1.5	1.1	195.4	23.3	2005.4
COLLECTORS	758.5	355.0	110.6	77.6	1.1	0.8	141.9	16.1	1461.6
FRONTAGE ROADS	427.9	201.1	62.7	44.7	0.6	0.4	76.4	8.7	822.3
RAMPS	34.0	16.5	5.1	3.4	0.1	0.0	6.4	0.9	66.5
TOTALS	11352.7	5386.8	1676.9	1134.5	16.1	11.2	2050.8	262.9	21891.9
DIURNAL	287.3	108.6	7.6	40.9	0.0	0.0	0.0	116.6	561.0
ALL	11640.0	5495.4	1684.5	1175.5	16.1	11.2	2050.8	379.5	22452.9

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	19952.0	9332.6	2901.7	1676.2	7.5	4.2	1849.6	199.0	35922.8
INTERSTATE HWYS & FW	28384.2	14803.1	4602.6	3373.4	13.0	7.3	3207.2	444.1	54834.9
MULTILANE HIGHWAYS	7201.4	3649.1	1134.6	731.0	2.9	1.6	709.8	109.4	13539.8
PRINCIPAL DIV. ART.	27693.4	13272.2	4126.6	2417.6	10.7	6.0	2636.7	298.0	50461.2
PRIN. UNDIV. ART.	5069.9	2473.1	768.9	455.8	2.0	1.1	496.6	53.6	9321.0
MINOR DIV. ART.	2936.0	1416.3	440.4	247.9	1.1	0.6	272.6	28.8	5343.7
MINOR UNDIV. ART.	10283.5	5037.4	1566.2	921.8	4.1	2.3	1006.2	103.5	18925.0
COLLECTORS	7782.9	3761.7	1169.6	669.6	3.0	1.7	737.0	77.7	14203.2
FRONTAGE ROADS	4315.2	2064.7	641.9	376.3	1.7	0.9	411.6	47.6	7859.9
RAMPS	294.4	150.5	46.8	30.4	0.1	0.1	32.6	3.2	558.1
TOTALS	113912.9	55960.8	17399.2	10900.0	46.0	25.7	11360.1	1365.0	210969.8

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: JEFFERSON

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1759.0	801.8	264.9	335.6	5.5	3.1	1048.8	6.0	4224.8
INTERSTATE HWYS & FW	7595.5	3444.3	1138.1	1471.1	22.9	13.0	4367.1	34.3	18086.3
MULTILANE HIGHWAYS	1564.6	716.9	236.9	291.2	4.6	2.7	887.3	6.9	3711.1
PRINCIPAL DIV. ART.	3446.4	1539.7	508.8	681.4	9.8	5.6	1869.1	13.3	8074.1
PRIN. UNDIV. ART.	753.7	334.2	110.4	152.6	2.1	1.2	397.7	3.0	1755.0
MINOR DIV. ART.	383.5	172.0	56.8	76.4	1.1	0.6	206.7	1.5	898.7
MINOR UNDIV. ART.	1571.8	697.6	230.5	321.3	4.4	2.5	836.9	6.3	3671.4
COLLECTORS	1024.8	456.0	150.7	208.4	2.9	1.7	555.2	4.0	2403.7
FRONTAGE ROADS	526.1	233.8	77.2	104.5	1.5	0.8	281.3	2.0	1227.3
RAMPS	63.3	27.5	9.1	13.6	0.2	0.1	32.6	0.3	146.7
TOTALS	18688.7	8423.7	2783.5	3656.2	54.9	31.3	10483.0	77.7	44199.1

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	246328.46	100201.41	27137.88	15447.72	835.01	417.51	25885.36	1252.52	417505.87
INTERSTATE HWYS & FW	832849.71	338786.32	91754.63	52229.56	2823.22	1411.61	87519.80	4234.83	1411609.68
MULTILANE HIGHWAYS	51277.81	20858.77	5649.25	3215.73	173.82	86.91	5388.52	260.73	86911.54
PRINCIPAL DIV. ART.	440624.64	179237.14	48543.39	27632.39	1493.64	746.82	46302.93	2240.46	746821.42
PRIN. UNDIV. ART.	209140.09	85073.94	23040.86	13115.57	708.95	354.47	21977.43	1063.42	354474.73
MINOR DIV. ART.	15803.33	6428.47	1741.04	991.06	53.57	26.79	1660.69	80.36	26785.30
MINOR UNDIV. ART.	305689.54	124348.29	33677.66	19170.36	1036.24	518.12	32123.31	1554.35	518117.86
COLLECTORS	75237.96	30605.27	8288.93	4718.31	255.04	127.52	7906.36	382.57	127521.96
FRONTAGE ROADS	97807.76	39786.21	10775.43	6133.71	331.55	165.78	10278.10	497.33	165775.86
RAMPS	10419.35	4238.38	1147.89	653.42	35.32	17.66	1094.91	52.98	17659.91
TOTALS	2285178.64	929564.19	251756.97	143307.81	7746.37	3873.18	240137.42	11619.55	3873184.13

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

VEHICLE HOURS

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	11240.224	4572.294	1238.330	704.895	38.102	19.051	1181.176	57.154	19051.227
INTERSTATE HWYS & FW	13765.305	5599.446	1516.517	863.248	46.662	23.331	1446.524	69.993	23331.025
MULTILANE HIGHWAYS	1093.922	444.985	120.517	68.602	3.708	1.854	114.955	5.562	1854.106
PRINCIPAL DIV. ART.	18292.605	7441.060	2015.287	1147.163	62.009	31.004	1922.274	93.013	31004.416
PRIN. UNDIV. ART.	5799.166	2358.983	638.891	363.677	19.658	9.829	609.404	29.487	9829.095
MINOR DIV. ART.	549.250	223.424	60.511	34.444	1.862	0.931	57.718	2.793	930.932
MINOR UNDIV. ART.	9826.090	3997.053	1082.535	616.212	33.309	16.654	1032.572	49.963	16654.389
COLLECTORS	2333.434	949.193	257.073	146.334	7.910	3.955	245.208	11.865	3954.972
FRONTAGE ROADS	2879.993	1171.523	317.287	180.610	9.763	4.881	302.643	14.644	4881.345
RAMPS	245.829	99.998	27.083	15.416	0.833	0.417	25.833	1.250	416.660
TOTALS	66025.818	26857.960	7274.031	4140.602	223.816	111.908	6938.306	335.724	111908.166

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	23.03	23.03	23.03	23.03	23.03	23.03	23.03	23.03
INTERSTATE HWYS & FW	62.75	62.75	62.75	62.75	62.75	62.75	62.75	62.75
MULTILANE HIGHWAYS	49.36	49.36	49.36	49.36	49.36	49.36	49.36	49.36
PRINCIPAL DIV. ART.	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54
PRIN. UNDIV. ART.	39.80	39.80	39.80	39.80	39.80	39.80	39.80	39.80
MINOR DIV. ART.	29.84	29.84	29.84	29.84	29.84	29.84	29.84	29.84
MINOR UNDIV. ART.	33.07	33.07	33.07	33.07	33.07	33.07	33.07	33.07
COLLECTORS	34.38	34.38	34.38	34.38	34.38	34.38	34.38	34.38
FRONTAGE ROADS	39.10	39.10	39.10	39.10	39.10	39.10	39.10	39.10
RAMPS	43.88	43.88	43.88	43.88	43.88	43.88	43.88	43.88

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	591.0	241.3	68.1	65.6	0.9	0.6	108.4	13.3	1089.1
INTERSTATE HWYS & FW	1195.5	514.3	144.6	103.7	1.5	1.0	185.5	42.7	2188.8
MULTILANE HIGHWAYS	73.6	31.7	8.9	7.0	0.1	0.1	12.7	2.4	136.6
PRINCIPAL DIV. ART.	929.0	388.7	109.5	101.9	1.3	0.9	165.0	23.0	1719.3
PRIN. UNDIV. ART.	340.1	144.4	40.6	34.9	0.5	0.3	62.2	10.0	632.9
MINOR DIV. ART.	30.2	12.6	3.5	3.2	0.0	0.0	5.6	0.8	56.0
MINOR UNDIV. ART.	547.5	229.5	64.6	57.6	0.8	0.5	101.9	14.8	1017.2
COLLECTORS	130.2	54.8	15.4	13.7	0.2	0.1	24.4	3.6	242.5
FRONTAGE ROADS	160.6	68.5	19.3	16.8	0.2	0.2	29.3	4.7	299.5
RAMPS	14.6	6.3	1.8	1.5	0.0	0.0	2.7	0.5	27.4
TOTALS	4012.2	1692.1	476.2	405.9	5.5	3.7	697.8	115.8	7409.3
DIURNAL	97.5	56.2	3.8	13.4	0.0	0.0	0.0	30.8	201.6
ALL	4109.7	1748.3	480.0	419.3	5.5	3.7	697.8	146.6	7610.9

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	6491.9	2758.1	777.8	539.8	2.3	1.3	589.8	65.4	11226.4
INTERSTATE HWYS & FW	12554.2	5831.4	1644.5	1464.0	5.1	2.8	1274.8	252.9	23029.7
MULTILANE HIGHWAYS	692.7	321.4	90.6	76.1	0.3	0.2	73.3	10.7	1265.3
PRINCIPAL DIV. ART.	9289.9	4019.0	1133.4	846.8	3.6	2.0	906.9	106.4	16307.9
PRIN. UNDIV. ART.	3232.6	1455.9	410.6	320.6	1.3	0.7	332.9	38.1	5792.8
MINOR DIV. ART.	306.4	134.0	37.8	26.3	0.1	0.1	28.8	3.1	536.5
MINOR UNDIV. ART.	5372.5	2374.2	669.6	486.1	2.1	1.1	525.6	56.4	9487.6
COLLECTORS	1254.3	557.8	157.3	116.5	0.5	0.3	125.5	13.3	2225.6
FRONTAGE ROADS	1481.8	667.2	188.1	149.8	0.6	0.3	156.7	17.3	2661.9
RAMPS	124.7	58.2	16.4	14.0	0.1	0.0	14.3	1.5	229.3
TOTALS	40801.2	18177.2	5126.2	4040.0	16.0	8.8	4028.7	565.0	72762.9

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: ORANGE

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	660.9	266.1	80.9	129.5	1.9	1.1	363.7	2.3	1506.4
INTERSTATE HWYS & FW	3223.5	1336.0	406.0	578.0	10.2	5.7	1929.8	14.6	7503.8
MULTILANE HIGHWAYS	169.8	68.3	20.8	33.1	0.5	0.3	91.7	0.7	385.1
PRINCIPAL DIV. ART.	1224.1	483.7	147.0	246.6	3.4	1.9	641.2	4.7	2752.6
PRIN. UNDIV. ART.	624.6	248.1	75.4	125.8	1.7	1.0	323.8	2.6	1402.9
MINOR DIV. ART.	43.2	17.1	5.2	8.8	0.1	0.1	21.7	0.2	96.4
MINOR UNDIV. ART.	851.9	335.8	102.0	174.6	2.3	1.3	431.5	3.4	1902.8
COLLECTORS	208.7	81.9	24.9	43.4	0.6	0.3	106.4	0.8	467.1
FRONTAGE ROADS	285.4	112.4	34.2	58.5	0.8	0.4	146.0	1.2	638.9
RAMPS	30.6	12.0	3.6	6.5	0.1	0.0	15.7	0.1	68.6
TOTALS	7322.7	2961.3	900.0	1404.8	21.4	12.0	4071.7	30.7	16724.6

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	44370.26	25564.32	2203.82	734.61	146.92	146.92	220.38	73.46	73460.69
INTERSTATE HWYS & FW	89320.34	51462.71	4436.44	1478.81	295.76	295.76	443.64	147.88	147881.36
MULTILANE HIGHWAYS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRINCIPAL DIV. ART.	82392.25	47471.03	4092.33	1364.11	272.82	272.82	409.23	136.41	136411.01
PRIN. UNDIV. ART.	10632.54	6126.03	528.11	176.04	35.21	35.21	52.81	17.60	17603.54
MINOR DIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COLLECTORS	6018.32	3467.51	298.92	99.64	19.93	19.93	29.89	9.96	9964.10
FRONTAGE ROADS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAMPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	232733.70	134091.60	11559.62	3853.21	770.64	770.64	1155.96	385.32	385320.70

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

VEHICLE HOURS

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	1558.669	898.041	77.417	25.806	5.161	5.161	7.742	2.581	2580.577
INTERSTATE HWYS & FW	1333.111	768.084	66.214	22.071	4.414	4.414	6.621	2.207	2207.138
MULTILANE HIGHWAYS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PRINCIPAL DIV. ART.	2088.376	1203.237	103.727	34.576	6.915	6.915	10.373	3.458	3457.577
PRIN. UNDIV. ART.	184.328	106.202	9.155	3.052	0.610	0.610	0.916	0.305	305.179
MINOR DIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MINOR UNDIV. ART.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLLECTORS	122.782	70.742	6.098	2.033	0.407	0.407	0.610	0.203	203.282
FRONTAGE ROADS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RAMPS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	5287.267	3046.306	262.613	87.538	17.508	17.508	26.261	8.754	8753.752

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	28.66	28.66	28.66	28.66	28.66	28.66	28.66	28.66
INTERSTATE HWYS & FW	67.21	67.21	67.21	67.21	67.21	67.21	67.21	67.21
MULTILANE HIGHWAYS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRINCIPAL DIV. ART.	42.78	42.78	42.78	42.78	42.78	42.78	42.78	42.78
PRIN. UNDIV. ART.	57.74	57.74	57.74	57.74	57.74	57.74	57.74	57.74
MINOR DIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINOR UNDIV. ART.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COLLECTORS	49.02	49.02	49.02	49.02	49.02	49.02	49.02	49.02
FRONTAGE ROADS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RAMPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	87.9	54.7	5.6	2.5	0.1	0.2	0.8	0.8	152.5
INTERSTATE HWYS & FW	138.3	88.4	9.1	3.0	0.2	0.2	0.9	1.7	241.9
MULTILANE HIGHWAYS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINCIPAL DIV. ART.	126.8	81.6	8.4	3.5	0.2	0.2	1.1	1.4	223.2
PRIN. UNDIV. ART.	14.1	9.3	0.9	0.4	0.0	0.0	0.1	0.2	25.0
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	7.5	5.0	0.5	0.2	0.0	0.0	0.1	0.1	13.4
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	374.6	239.0	24.5	9.6	0.5	0.7	2.9	4.1	656.0
DIURNAL	44.9	35.2	3.4	8.1	0.0	0.0	0.0	11.7	103.3
ALL	419.6	274.2	27.9	17.8	0.5	0.7	2.9	15.8	759.3

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	888.7	574.5	58.2	19.9	0.3	0.3	3.6	3.0	1548.6
INTERSTATE HWYS & FW	1581.2	1078.2	109.3	46.9	0.6	0.6	6.4	11.6	2834.9
MULTILANE HIGHWAYS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINCIPAL DIV. ART.	1141.1	774.1	78.5	32.3	0.5	0.5	5.5	4.5	2036.9
PRIN. UNDIV. ART.	127.0	89.4	9.1	4.4	0.1	0.1	0.7	0.7	231.3
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	56.6	40.9	4.1	2.1	0.0	0.0	0.3	0.2	104.3
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	3794.6	2557.1	259.2	105.5	1.4	1.6	16.5	20.1	6756.0

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: HARDIN

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	124.0	72.9	7.9	6.5	0.3	0.4	2.8	0.2	215.0
INTERSTATE HWYS & FW	382.2	238.9	25.9	17.0	1.2	1.4	10.9	0.6	678.1
MULTILANE HIGHWAYS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINCIPAL DIV. ART.	252.1	148.1	16.1	13.5	0.7	0.7	6.0	0.3	437.5
PRIN. UNDIV. ART.	39.4	23.9	2.6	1.9	0.1	0.1	1.0	0.1	69.2
MINOR DIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINOR UNDIV. ART.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLLECTORS	18.0	10.3	1.1	1.0	0.0	0.1	0.4	0.0	31.0
FRONTAGE ROADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RAMPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTALS	815.7	494.2	53.7	40.0	2.3	2.6	21.2	1.1	1430.9

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

VEHICLE MILES OF TRAVEL

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	959182.54	397691.35	102988.22	58104.19	3247.98	1697.45	96353.20	4725.05	1623989.98
INTERSTATE HWYS & FW	3181281.21	1309209.51	345076.20	195381.44	10776.99	5536.37	325361.57	15869.72	5388493.00
MULTILANE HIGHWAYS	510571.96	207690.29	56249.45	32018.92	1730.75	865.38	53653.33	2596.13	865376.21
PRINCIPAL DIV. ART.	1775665.94	736260.33	190639.43	107552.46	6012.73	3142.78	178346.47	8746.28	3006366.41
PRIN. UNDIV. ART.	492283.96	202052.04	53591.40	30381.29	1667.92	851.57	50667.03	2466.68	833961.89
MINOR DIV. ART.	155560.62	63278.89	17138.03	9755.50	527.32	263.66	16347.05	790.99	263662.06
MINOR UNDIV. ART.	876321.33	356469.69	96543.88	54955.74	2970.58	1485.29	92088.00	4455.87	1485290.39
COLLECTORS	461696.63	188828.18	50500.77	28676.08	1564.60	792.26	47914.73	2326.97	782300.23
FRONTAGE ROADS	291400.94	118535.98	32103.49	18274.30	987.80	493.90	30621.79	1481.70	493899.90
RAMPS	33372.70	13575.34	3676.65	2092.86	113.13	56.56	3506.96	169.69	56563.90
TOTALS	8737337.83	3593591.59	948507.53	537192.79	29599.81	15185.22	894860.12	43629.07	14799903.97

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

VEHICLE HOURS

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	49091.370	20233.377	5314.071	3006.670	166.289	85.725	5002.704	244.272	83144.479
INTERSTATE HWYS & FW	60198.472	24713.315	6551.381	3713.628	203.958	104.186	6192.473	301.523	101978.935
MULTILANE HIGHWAYS	11600.267	4718.753	1277.995	727.474	39.323	19.661	1219.011	58.984	19661.469
PRINCIPAL DIV. ART.	73979.477	30447.074	8023.933	4543.001	250.614	128.764	7565.031	369.006	125306.900
PRIN. UNDIV. ART.	15764.813	6444.027	1725.649	980.133	53.426	27.018	1638.187	79.528	26712.780
MINOR DIV. ART.	5743.958	2336.525	632.809	360.214	19.471	9.736	603.602	29.207	9735.521
MINOR UNDIV. ART.	28829.802	11727.377	3176.165	1807.971	97.728	48.864	3029.572	146.592	48864.071
COLLECTORS	16702.666	6815.102	1832.696	1041.788	56.610	28.508	1742.903	84.508	28304.780
FRONTAGE ROADS	11551.265	4698.820	1272.597	724.401	39.157	19.578	1213.862	58.735	19578.415
RAMPS	861.846	350.581	94.949	54.048	2.922	1.461	90.567	4.382	1460.756
TOTALS	274323.935	112484.951	29902.246	16959.329	929.496	473.502	28297.911	1376.737	464748.105

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

AVERAGE OPERATIONAL SPEED WEIGHTED BY VMT

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE							
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
LOCAL	21.05	21.19	20.85	20.78	21.04	21.37	20.70	20.80
INTERSTATE HWYS & FW	56.68	56.80	56.52	56.46	56.68	56.96	56.39	56.48
MULTILANE HIGHWAYS	49.61	49.61	49.61	49.61	49.61	49.61	49.61	49.61
PRINCIPAL DIV. ART.	30.24	30.47	29.91	29.79	30.22	30.77	29.65	29.83
PRIN. UNDIV. ART.	36.37	36.56	36.12	36.03	36.36	36.80	35.92	36.06
MINOR DIV. ART.	29.95	29.95	29.95	29.95	29.95	29.95	29.95	29.95
MINOR UNDIV. ART.	33.43	33.43	33.43	33.43	33.43	33.43	33.43	33.43
COLLECTORS	31.07	31.17	30.95	30.90	31.07	31.30	30.85	30.92
FRONTAGE ROADS	31.98	31.98	31.98	31.98	31.98	31.98	31.98	31.98
RAMPS	41.42	41.42	41.42	41.42	41.42	41.42	41.42	41.42

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

POUNDS OF VOC POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	2476.5	1122.0	331.6	266.3	3.6	2.6	441.9	46.3	4690.7
INTERSTATE HWYS & FW	4414.5	2113.6	622.6	386.7	5.8	4.1	725.0	134.2	8406.6
MULTILANE HIGHWAYS	785.4	373.7	115.2	70.5	1.1	0.7	134.6	21.6	1502.8
PRINCIPAL DIV. ART.	3763.7	1740.9	513.8	387.1	5.3	3.8	655.9	79.8	7150.4
PRIN. UNDIV. ART.	869.7	397.5	117.4	87.7	1.3	0.9	157.5	21.5	1653.5
MINOR DIV. ART.	311.6	143.8	44.5	31.7	0.5	0.3	58.1	6.7	597.2
MINOR UNDIV. ART.	1584.8	719.2	217.0	162.2	2.3	1.6	297.4	38.1	3022.6
COLLECTORS	896.2	414.9	126.5	91.6	1.3	0.9	166.3	19.8	1717.5
FRONTAGE ROADS	588.5	269.6	81.9	61.5	0.8	0.6	105.7	13.3	1121.8
RAMPS	48.6	22.9	6.9	4.9	0.1	0.0	9.2	1.3	93.9
TOTALS	15739.6	7317.9	2177.6	1550.1	22.1	15.6	2751.5	382.8	29957.2
DIURNAL	429.7	199.9	14.8	62.4	0.0	0.0	0.0	159.1	865.9
ALL	16169.3	7517.8	2192.4	1612.6	22.1	15.6	2751.5	541.9	30823.1

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

POUNDS OF CO POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	27332.7	12665.2	3737.7	2235.8	10.1	5.8	2443.0	267.4	48697.9
INTERSTATE HWYS & FW	42519.6	21712.7	6356.4	4884.4	18.6	10.7	4488.5	708.6	80699.4
MULTILANE HIGHWAYS	7894.1	3970.5	1225.2	807.1	3.2	1.8	783.2	120.1	14805.0
PRINCIPAL DIV. ART.	38124.3	18065.4	5338.5	3296.6	14.7	8.5	3549.1	408.9	68806.1
PRIN. UNDIV. ART.	8429.5	4018.4	1188.6	780.8	3.4	1.9	830.2	92.4	15345.1
MINOR DIV. ART.	3242.5	1550.3	478.1	274.2	1.2	0.7	301.3	31.9	5880.3
MINOR UNDIV. ART.	15656.0	7411.6	2235.8	1407.9	6.2	3.4	1531.8	159.9	28412.6
COLLECTORS	9093.8	4360.3	1331.0	788.2	3.5	2.0	862.9	91.3	16533.1
FRONTAGE ROADS	5797.0	2731.8	830.1	526.1	2.3	1.3	568.3	64.9	10521.8
RAMPS	419.1	208.7	63.2	44.4	0.2	0.1	46.9	4.7	787.4
TOTALS	158508.7	76695.1	22784.6	15045.4	63.4	36.1	15405.3	1950.1	290488.7

JORTS 2016 TRIPS ON 2016 NETWORK - (LONG RANGE PLAN)
24 HOUR

POUNDS OF NOX POLLUTION

COUNTY: ALL COUNTIES

ROADWAY TYPE	VEHICLE TYPE								TOTALS
	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
LOCAL	2544.0	1140.8	353.7	471.7	7.7	4.6	1415.4	8.5	5946.3
INTERSTATE HWYS & FW	11201.1	5019.1	1570.1	2066.2	34.2	20.1	6307.9	49.5	26268.2
MULTILANE HIGHWAYS	1734.4	785.2	257.7	324.2	5.1	2.9	979.0	7.7	4096.3
PRINCIPAL DIV. ART.	4922.6	2171.4	671.8	941.6	13.8	8.2	2516.3	18.4	11264.2
PRIN. UNDIV. ART.	1417.7	606.3	188.4	280.3	3.9	2.3	722.5	5.7	3227.1
MINOR DIV. ART.	426.8	189.1	62.0	85.2	1.2	0.7	228.5	1.7	995.1
MINOR UNDIV. ART.	2423.7	1033.4	332.6	495.9	6.7	3.8	1268.5	9.7	5574.1
COLLECTORS	1251.5	548.2	176.7	252.8	3.5	2.0	662.1	4.8	2901.8
FRONTAGE ROADS	811.5	346.2	111.4	163.0	2.2	1.3	427.4	3.2	1866.2
RAMPS	93.9	39.5	12.7	20.1	0.3	0.1	48.3	0.4	215.3
TOTALS	26827.1	11879.2	3737.1	5101.0	78.7	46.0	14575.9	109.6	62354.5

