Houston-Galveston-Brazoria (HGB) 2008-Eight-Hour Ozone Reasonable Further Progress (RFP) On-Road Mobile Emissions Inventories

FINAL REPORT

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EXECUTIVE SUMMARY

This report describes emissions inventory (EI) development work conducted by the Texas A&M Transportation Institute (TTI) on behalf of the Texas Commission on Environmental Quality (TCEQ). Specifically, TTI developed a set of on-road mobile source EIs for the eight-county Houston-Galveston-Brazoria (HGB) area (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties). TTI developed ozone season, summer weekday EIs for 2011, 2017, 2018, 2020, 2023, 2026, and 2027. The project also produced individual control strategy emission reductions estimates for the 2017 and later analysis years. This work was in support of TCEQ's HGB 2008 eight-hour ozone nonattainment area reasonable further progress (RFP) state implementation plan (SIP) revision. There were 13 RFP scenario EIs as delineated in Table 1.

Table 1. HGB RFP Inventory Scenarios.

No.	RFP Inventory	Activity Input[1]	Emission Rates Input[2]
1	2011 Base Year	2011 (Base Year)	2011 Control Strategy
2	2017 Pre-1990 Controls	2017 (Milestone Year)	2017 Pre-1990 Controls
3	2017 Control Strategy	2017 (Milestone Year)	2017 Control Strategy
4	2018 Pre-1990 Controls	2018 (Milestone Contingency Year)	2018 Pre-1990 Controls
5	2018 Control Strategy	2018 (Milestone Contingency Year)	2018 Control Strategy
6	2020 Pre-1990 Controls	2020 (Milestone Year)	2020 Pre-1990 Controls
7	2020 Control Strategy	2020 (Milestone Year)	2020 Control Strategy
8	2023 Pre-1990 Controls	2023 (Milestone Contingency Year)	2023 Pre-1990 Controls
9	2023 Control Strategy	2023 (Milestone Contingency Year)	2023 Control Strategy
10	2026 Pre-1990 Controls	2026 (Attainment Year)	2026 Pre-1990 Controls
11	2026 Control Strategy	2026 (Attainment Year)	2026 Control Strategy
12	2027 Pre-1990 Controls	2027 (Attainment Contingency Year)	2027 Pre-1990 Controls
13	2027 Control Strategy	2027 (Attainment Contingency Year)	2027 Control Strategy

[1] For EI calculations: vehicle miles traveled (VMT) mix, link VMT/speeds, and off-network activity.

[2] "Pre-1990 Controls" rates are for the calendar year of evaluation fleet but exclude post-1990 Clean Air Act Amendment (CAAA) controls – no Inspection and Maintenance (I/M) program, no post-1990 Federal Motor Vehicle Control Program (FMVCP) effects, no reformulated gasoline (RFG) (uses pre-1992 conventional gasoline with 1992 summer Reid vapor pressure [RVP] limit promulgated prior to the enactment of the 1990 CAAA), no Texas Low Emissions Diesel (TxLED). "Control Strategy" rates include effects of control strategies current for each analysis year (i.e., both pre- and post-1990 FMVCP, RFG, I/M [depending on county], TxLED fuel).

TTI developed the inventories of traffic activity and total emissions at a temporal scale of each hour of the day based on individual roadway links acquired from the HGB area travel demand model (TDM), provided by the Houston-Galveston Area Council (H-GAC). TTI estimated on-road mobile source vehicle activity and emissions for on-network (roadways) and off-network (e.g., parking areas, driveways) activity categories. As shown in Table 1, the RFP EIs include the control strategy scenario for all years and the pre-

1990 (pre-90) control scenario for all analysis years other than the base year. These two RFP scenarios enable the estimation of emissions reductions from control strategies. The following pollutants were modeled: volatile organic compounds (VOC), oxides of nitrogen (NO_X), carbon monoxide (CO), ammonia (NH_3); sulfur dioxide (SO_2), atmospheric carbon dioxide (CO_2), and particulate matter (PM) pollutants in both 2.5 and 10-micron size categories ($PM_{2.5}$ and PM_{10}). Individual control strategy emissions reduction estimates were produced for VOC and NO_X.

TTI developed the EIs using the latest version of the MOtor Vehicle Emissions Simulator (MOVES)—MOVES3 and associated Environmental Protection Agency (EPA) guidance documentation.[1, 2] The EIs were developed using a rates-per-activity approach, which develops and applies MOVES emission rates externally with local activity data. The inventory methods included gasoline and diesel-powered vehicle combinations modeled for on-network and off-network activity and emissions. The on-network or roadway-based activity consists of VMT and average operational speeds and off-network activity consists of off-network idling hours, source hours parked, vehicle starts, source hours extended idling, and diesel auxiliary power unit hours. The EIs were calculated using a mix of local data inputs (e.g., registration data, local TDMs, traffic count data) and MOVES defaults. The latest (readily) available data, models, and procedures were used, as well as the latest planning assumptions, to assure that motor vehicle emissions budgets to be established by TCEQ in the SIP will be consistent with transportation conformity analysis requirements.

TTI calculated the EIs using utilities developed and maintained by TTI (the TTI EI utilities, updated for use with MOVES3).[3] The EI results were summarized into various formats specified for reporting and air quality planning processes as described below:

- Emissions Inventory Data Files:
    - RFP EI and individual control reductions summaries (spreadsheet file).

[1] EPA's latest March 2021 MOVES3.0.1 release was used in this analysis.

[2] *MOVES3 Technical Guidance: Using MOVES to Prepare Emission Inventories for Sate Implementation Plans and Transportation Conformity*, EPA, November 2020.

[3] TTI's MOVES2014a-compatible inventory estimation utilities are detailed in: *TTI Emissions Inventory Estimation Utilities Using MOVES: MOVES2014aUTL User's Guide,* TTI, August 2016. Note that the TTI utilities have been updated for use with MOVES3, however, the main inventory process and procedures are consistent with TTI's MOVES2014a-based utilities, and its user guide is provided for reference until the TTI's MOVES3 utilities document is available.

  - EI output files – standard tab-delimited, hourly, and 24-hour report summaries of EIs by MOVES source use type (SUT) and fuel type (FT) combination (or vehicle type) and TDM roadway class.
  - EI extracts – various tab-delimited EI aggregations from the TTI EI utilities standard output.
  - Extensible markup language (XML)-formatted EI summaries – for uploading to TCEQ's Texas Air Emissions Repository (TexAER).

- Emissions Factor Data Files:
  - MOVES model input data, build and run files, as well as post-processing adjustment factors.

Table 2, Table 3, and Table 4 summarize the pollutant totals EI estimates and individual control strategy reduction estimates for the HGB eight-county area. Table 2 regional EI pollutant totals are for VOC, NO_X, CO, NH_3, SO_2, CO_2, $PM_{2.5}$, and PM_{10}. The PM estimates in are the aggregates of exhaust, brakewear, and tirewear processes; VOC includes exhaust and evaporative emission processes. Table 3 and Table 4 summarize control strategy reduction estimates for VOC and NO_X, respectively.

Table 2. HGB Eight-County Area Summer Weekday On-Road Mobile Source RFP Emissions Inventories (Tons/Day).

Base Year[1]

Year	VMT	Speed	VOC	CO	NO_X	SO_2	NH_3	CO_2	$PM_{2.5}$	PM_{10}
2011	145,516,066	30.32	84.12	1,244.41	179.34	1.52	5.86	89,915.60	6.44	14.82

Pre-1990 Controls[2]

Year	VMT	Speed	VOC	CO	NO_X	SO_2	NH_3	CO_2	$PM_{2.5}$	PM_{10}
2017	173,533,549	34.63	619.10	8,950.79	1,047.74	48.76	19.82	98,733.37	20.97	30.57
2018	178,967,556	37.72	609.63	8,785.97	1,081.45	50.77	20.59	100,247.06	21.44	30.38
2020	187,942,688	37.56	641.98	9,232.64	1,138.21	53.52	21.63	105,494.76	22.64	32.10
2023	199,141,361	37.49	680.43	9,772.96	1,205.41	56.90	22.96	111,792.68	24.01	34.05
2026	208,706,310	37.19	716.68	10,288.79	1,264.15	59.69	24.05	117,411.78	25.22	35.87
2027	211,938,550	37.07	729.07	10,465.46	1,284.15	60.65	24.42	119,335.62	25.65	36.51

Control Strategy[3]

Year	VMT	Speed	VOC	CO	NO_X	SO_2	NH_3	CO_2	$PM_{2.5}$	PM_{10}
2017	173,533,549	34.63	48.53	913.01	99.11	1.08	5.01	96,167.69	3.95	11.85
2018	178,967,556	37.72	45.03	861.23	92.17	1.12	4.99	95,767.64	3.60	10.77
2020	187,942,688	37.56	39.14	812.98	74.87	0.58	4.91	96,275.67	3.01	10.53
2023	199,141,361	37.49	33.85	724.71	59.45	0.57	4.97	94,947.26	2.62	10.58
2026	208,706,310	37.19	28.98	643.75	49.08	0.55	5.06	92,682.63	2.43	10.87
2027	211,938,550	37.07	27.98	621.01	47.31	0.55	5.11	92,046.58	2.40	11.01

[1] Base year inventory: 2011 activity inputs and 2011 current control strategy emission rates.

[2] Pre-1990 controls inventories: analysis year activity inputs and analysis year pre-1990 controls emission rates. Rates are for analysis year fleet but exclude post-1990 CAAA controls – no I/M program, no post-1990 FMVCP effects, no RFG (instead uses pre-1992 conventional gasoline with 1992 summer RVP limit promulgated prior to the enactment of the 1990 CAAA), and no TxLED.

[3] Control strategy inventories: analysis year activity inputs and analysis year control strategy emission rates. Rates include effects of control strategies for analysis year (i.e., both pre- and post-1990 FMVCP, Tier 3 RFG and Ultra Low Sulfur Diesel (ULSD), I/M [depending on county], and TxLED).

Table 3. HGB Eight-County Area Summer Weekday RFP Control Scenario Inventories and VOC Reductions (Tons) by Analysis Year.

VOC Emissions Analysis	2011	2017	2018	2020	2023	2026	2027
Pre-90 Control Inventory	-	619.10	609.63	641.98	680.43	716.68	729.07
Control Strategy Inventory	84.12	48.53	45.03	39.14	33.85	28.98	27.98
Total Reductions	-	570.56	564.60	602.84	646.58	687.70	701.09
FMVCP Reductions	-	554.73	550.59	589.50	635.40	677.98	691.79
Tier 3 RFG and ULSD[1] Reductions	-	10.81	9.34	9.01	7.04	5.65	5.22
I/M Reductions	-	5.02	4.66	4.34	4.13	4.08	4.08
TxLED Reductions	-	-	-	-	-	-	-

[1] RFG with Tier 3 sulfur and pre-1990 diesel replaced with Ultra Low Sulfur Diesel.
Notes: Columns may not total due to rounding, and "-" = "not applicable".

Table 4. HGB Eight-County Area Summer Weekday RFP Control Scenario Inventories and NO_X Reductions (Tons) by Analysis Year.

NO_X Emissions Analysis	2011	2017	2018	2020	2023	2026	2027
Pre-90 Control Inventory	-	1,047.74	1,081.45	1,138.21	1,205.41	1,264.15	1,284.15
Control Strategy Inventory	179.34	99.11	92.17	74.87	59.45	49.08	47.31
Total Reductions	-	948.63	989.28	1,063.33	1,145.96	1,215.07	1,236.83
FMVCP Reductions	-	907.99	953.12	1,030.35	1,122.54	1,197.68	1,220.91
Tier 3 RFG and ULSD[1] Reductions	-	32.30	28.80	27.55	19.48	14.18	12.86
I/M Reductions	-	5.37	4.52	2.90	1.84	1.36	1.25
TxLED Reductions	-	2.97	2.84	2.53	2.10	1.85	1.81

[1] RFG with Tier 3 sulfur and pre-1990 diesel replaced with Ultra Low Sulfur Diesel.
Notes: Columns may not total due to rounding, and "-" = "not applicable".

1.0 INTRODUCTION

The Texas Commission on Environmental Quality (TCEQ) works with local planning districts, the Texas Department of Transportation (TxDOT), and the Texas A&M Transportation Institute (TTI) to provide on-road, mobile source emissions inventories of air pollutants. TCEQ typically funds mobile source inventory work in support of the federal Clean Air Act Amendment (CAAA).

Accurate emissions inventories (EIs) are critical if state, local, and federal agencies are to attain, and maintain, the National Ambient Air Quality Standards (NAAQS) that the U.S. Environmental Protection Agency (EPA) has established for criteria pollutants such as ozone, particulate matter (PM), and carbon monoxide (CO), as well as to control hazardous air pollutant (HAP) emissions.

This report describes work conducted by TTI on behalf of TCEQ. The work involves the calculation of EIs for the Houston-Galveston-Brazoria (HGB) area's eight ozone nonattainment counties of Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller. Ozone season, summer weekday EIs were developed for 2011, 2017, 2018, 2020, 2023, 2026, and 2027, along with emissions reductions from individual control strategies estimated for the 2017 and later analysis years.

The EIs and control strategy reduction estimates have been commissioned to be used for air quality planning by TCEQ. Specifically, this work was in support of TCEQ's plans to update the state implementation plan (SIP) which will require a reasonable further progress (RFP) analysis from the base year to the attainment year to demonstrate continued progress toward attainment of the EPA's 2008 eight-hour ozone standard for the HGB eight-county nonattainment area. The HGB RFP EIs were developed using the latest version of EPA's Motor Vehicle Emissions Simulator (MOVES) and the latest planning assumptions to assure the motor vehicle emissions budgets set by the SIP revision will be consistent with transportation conformity analysis requirements.

1.1 OBJECTIVE

The purpose of this document is to describe the methods and data used to develop on-road mobile source, ozone season, summer weekday RFP EIs and control strategy reductions for the HGB region. The RFP EIs were required for the base year (2011), RFP milestone years (2017 and 2020), milestone contingency years (2018 and 2023), attainment year (2026), and an attainment contingency year (2027). Individual control measure reduction estimates were required for the milestone years and attainment year,

and contingency measure control reduction estimates were required for the milestone and attainment contingency years.

The pollutants inventoried were volatile organic compounds (VOC), oxides of nitrogen (NO_X), carbon monoxide (CO), ammonia (NH_3); sulfur dioxide (SO_2), atmospheric carbon dioxide (CO_2), and particulate matter (PM) pollutants in both 2.5 and 10-micron size categories ($PM_{2.5}$ and PM_{10}). Individual control strategy emissions reduction estimates were produced for VOC and NO_X. The EIs were estimated based on on-network and off-network traffic activity. On-network activity includes vehicle miles traveled on regional roadways. Off-network activity includes traffic activity such as vehicle starts, off-network idling (ONI), source hours parked, and long-haul truck hotelling.

The methods used to calculate the EIs are an extension of historically consistent traffic activity and emission rate methods developed by TTI. The HGB area is served by a Travel Demand Model (TDM) administered by the Houston-Galveston Area Council (H-GAC). As such, the EI calculations described in this document are based on an hourly, link-level analysis that uses the outputs of the regional TDM, other local data sources consistent with the region (e.g., seasonal day type and hourly travel factors; vehicle population data; and environmental inputs), and MOVES default inputs. This report details all the data sources used to define the EIs developed for this project.

At the request of TCEQ, the EIs were developed using the latest version of the EPA's on-road emissions inventory software—MOVES3. MOVES3 was released in November 2020 (and updated in March 2021) to replace the MOVES2014b version of the software. The EI methods described in this document have been developed to incorporate the latest information on on-road mobile source emissions and methods outlined in the associated EPA guidance for conducting MOVES3 based EIs.

In addition to calculating EIs and control strategy reductions, this project involves the development of electronic deliverables that were post-processed from the EI results into formats suitable for reporting and air quality planning. These outputs include:

- Emissions inventory data files:
    - RFP EI and individual control reductions summaries (spreadsheet file).
    - EI output files – standard tab-delimited, hourly and 24-hour EI summaries by county, MOVES source use type (SUT) and fuel type (FT) combination (or vehicle type), and TDM roadway class.
    - EI extracts – various tab-delimited EI aggregations from the TTI EI utilities standard output.

  - Extensible markup language (XML)-formatted EI summaries – for uploading to TCEQ's Texas Air Emissions Repository (TexAER).
- Emissions factor data files:
  - MOVES model input data, build and run files, as well as post-processing adjustment factors.

1.2 Summary of Modeling Methodology

Each EI was calculated using a detailed MOVES rates-per-activity method based on the HGB regional TDM. This approach calculates on-network emissions at the scale of each link defined by the regional TDM outputs.

The TTI rates-activity estimation methods were performed in four basic steps, simplified below:

1. **Calculate Emission Rates:** MOVES3 was used to estimate regional emission rates (or factors) relevant to the analysis area and RFP scenario. The rates were calculated based on local inputs to MOVES such as temperature and humidity, fuel formulations, etc. These emission rates were post-processed into the input form specific to RFP scenarios and required by the utility for the emissions calculations (to include conversions, adjustments, and reformatting).
2. **Estimate Traffic Activity:** The local TDM data sets (designated for each analysis year) was processed to derive 24 hourly vehicle miles traveled (VMT) and speed estimates for all TDM links as well as for added intrazonal links. Further processing was done to convert VMT based on Highway Performance Monitoring System (HPMS) factors and seasonal and daily adjustment factors. Local automatic traffic recorder (ATR) traffic count data was used to process the TDM activity information. After the on-network activity was estimated, off-network activity was calculated using outputs from the processed travel model, vehicle population data, and MOVES default inputs. The traffic activity was processed to replicate operating conditions described by the summer weekday EI scenario.
3. **Calculate Total Emissions:** The emission rates calculated in Step 1 were multiplied by the on- and off-network activity calculated in Step 2. This yielded emissions estimates in units of mass calculated at a spatial scale of each link (on-network) or county (off-network) for each hour of the day.

4. **Postprocess EI Outputs:** Outputs (for each pollutant) were post-processed into a variety of formats and electronic deliverables for reporting purposes and for air quality planning.

Subsequent sections of this report describe these simplified steps in more detail.

1.3 Emissions Inventory and Control Strategy Reductions Scope

The following is a simplified view of the scope (entities modeled and data inputs) agreed upon with the TCEQ project manager. The scope for the EIs is outlined first followed by the scope for estimation of the control strategy reductions.

1.3.1 RFP Emissions Inventories

For consistency with EPA EI development guidance, TTI used the most recent activity information, based upon current travel demand modeling; the most recent version of the EPA's on-road emissions model, MOVES3[4]; and methods agreed upon with the TCEQ Project Manager and consistent with EPA's RFP guidance.

Geography, Time Period, and Day Type:

- Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties.
- Analysis years 2011, 2017, 2018, 2020, 2023, 2026, and 2027.
- Summer season of June through August.
- Weekday activity (average Monday through Friday).

Two RFP Control Scenarios:

- EIs with pre-1990 controls only.
- EIs with pre- and post-1990 controls strategies.

Table 5 lists the RFP inventories with activity and emission rate components which when combined produce the 13 required RFP EIs.

[4] MOVES3.0.1 (EPA, March 2021), the latest version of MOVES3 at the time of the analysis, was used.

Table 5. HGB RFP Inventory Scenarios.

No.	RFP Inventory	Activity Input[1]	Emission Rates Input[2]
1	2011 Base Year	2011 (Base Year)	2011 Control Strategy
2	2017 Pre-1990 Controls	2017 (Milestone Year)	2017 Pre-1990 Controls
3	2017 Control Strategy	2017 (Milestone Year)	2017 Control Strategy
4	2018 Pre-1990 Controls	2018 (Milestone Contingency Year)	2018 Pre-1990 Controls
5	2018 Control Strategy	2018 (Milestone Contingency Year)	2018 Control Strategy
6	2020 Pre-1990 Controls	2020 (Milestone Year)	2020 Pre-1990 Controls
7	2020 Control Strategy	2020 (Milestone Year)	2020 Control Strategy
8	2023 Pre-1990 Controls	2023 (Milestone Contingency Year)	2023 Pre-1990 Controls
9	2023 Control Strategy	2023 (Milestone Contingency Year)	2023 Control Strategy
10	2026 Pre-1990 Controls	2026 (Attainment Year)	2026 Pre-1990 Controls
11	2026 Control Strategy	2026 (Attainment Year)	2026 Control Strategy
12	2027 Pre-1990 Controls	2027 (Attainment Contingency Year)	2027 Pre-1990 Controls
13	2027 Control Strategy	2027 (Attainment Contingency Year)	2027 Control Strategy

[1] For external inventory calculations: vehicle miles traveled (VMT) mix, link VMT/speeds, and off-network activity.

[2] "Pre-1990 Controls" rates are for the calendar year of evaluation fleet but exclude post-1990 Clean Air Act Amendment (CAAA) controls – no Inspection and Maintenance (I/M) program, no post-1990 Federal Motor Vehicle Control Program (FMVCP) effects, no reformulated gasoline (RFG) (uses pre-1992 conventional gasoline with 1992 summer Reid vapor pressure [RVP] limit promulgated prior to the enactment of the 1990 CAAA), no Texas Low Emissions Diesel (TxLED). "Control Strategy" rates include effects of control strategies current for subject analysis year (i.e., both pre- and post-1990 FMVCP, RFG, I/M [depending on county], TxLED fuel).

Source Use Types, Activity Types, and Emissions Processes:

- *Source use and fuel types (the various combinations of these are referred to as vehicle types) modeled*: See Table 6.
- *Traffic activity modeled*: VMT, vehicle starts, hotelling hours (classified by auxiliary power unit [APU], engine on, engine off), source hours parked, off-network idling.
- *Vehicle-based emissions processes modeled*: running exhaust; crankcase running exhaust; start exhaust; crankcase start exhaust; extended idle exhaust; crankcase extended idle exhaust; auxiliary power exhaust; evaporative permeation; evaporative fuel vapor venting; evaporative liquid leaks; brakewear; tirewear.
- *Refueling emissions processes modeled*: not applicable.

Table 6. MOVES SUT/Fuel Types (Vehicle Types).

SUT ID	SUT Description	SUT Abbreviation[1]	Fuel Types
11	Motorcycle	MC	Gasoline
21	Passenger Car	PC	Gasoline, Diesel
31	Passenger Truck	PT	Gasoline, Diesel
32	Light Commercial Truck	LCT	Gasoline, Diesel
41	Other Buses	OBus	Gasoline, Diesel
42	Transit Bus	TBus	Gasoline, Diesel
43	School Bus	SBus	Gasoline, Diesel
51	Refuse Truck	RT	Gasoline, Diesel
52	Single Unit Short-Haul Truck	SUShT	Gasoline, Diesel
53	Single Unit Long-Haul Truck	SULhT	Gasoline, Diesel
54	Motor Home	MH	Gasoline, Diesel
61	Combination Short-Haul Truck	CShT	Gasoline, Diesel
62	Combination Long-Haul Truck	CLhT	Diesel

[1] The SUT/fuel type, or vehicle type, labels are the combined SUT abbreviation and fuel type names separated by an underscore (e.g., MC_Gas, RT_Diesel, and SBus_Gas are gasoline-powered motorcycles, diesel-powered refuse trucks, and gasoline-powered school buses, respectively).

Pollutants Modeled:

- VOC; CO; NO_X; NH_3; SO_2; primary PM_{10} - exhaust, brakewear, and tirewear; primary $PM_{2.5}$ - exhaust, brakewear, and tirewear; and atmospheric CO_2.

Emission Rate (MOVES) Input Data and Adjustments:

- *Emission rates*: EPA's latest Mobile Source Emission Rate Model – MOVES3.0.1 (herein abbreviated to MOVES). This latest version of the model was released in March 2021 and downloaded from the following link: https://www.epa.gov/moves/latest-versionmotor-vehicle-emission-simulator-moves.
- *Local environmental input data*: 2011 climate inputs (temperature, humidity, barometric pressure) provided by TCEQ.
- *Local age distributions*: County registration data for locality-specific age distributions input. The latest available registration data (2018 end-of-year [no mid-year available]) was used for historical years (no other local registration data was available) and for the future analysis years.
- *Control program parameters*: RVP and fuel settings, for example, based upon the EI type as defined by the RFP analysis control scenarios.
- *Local fuel formulation input data*:
    - Consistent with Code of Federal Regulations (CFR) Title 40 – Protection of the Environment, Part 80 – Regulation of Fuels and Fuel Additives, Section 27 –

Controls and Prohibitions on Gasoline Volatility (40 CFR § 80.27), as appropriate for RFP control scenarios.
    - HGB reformulated gasoline program as appropriate for RFP control scenarios.
    - Federally regulated gasoline and diesel sulfur levels or latest available fuel survey data for RFP control scenarios.
    - EPA's reformulated gasoline compliance data and the TCEQ fuel property survey data, including RVP, to develop model inputs. TCEQ provided the 2011, 2017, and 2020 Summer Fuel Field Study Final Report and associated electronic files.

- *Inspection and maintenance program information*: The I/M program currently in place for Brazoria, Fort Bend, Galveston, Harris, and Montgomery Counties, as appropriate for RFP control scenarios.
- *Federal motor vehicle control programs*: The effects of all the federal motor vehicle control programs that are included as default inputs in MOVES, consistent with RFP control scenarios.
- *Texas Low Emission Diesel*: Post-processed the diesel vehicle NO_X emission factors to account for the TxLED program, consistent with 30 Texas Administrative Code (TAC) Sections 114.312-114.319, for RFP control scenarios as appropriate. Used year-specific TxLED adjustment factors developed using the benefit information described in the EPA Memorandum "Texas Low Emission Diesel Fuel Benefits," and the method as documented in previous Texas on-road emissions inventory development reports.

Traffic Activity Input Data:

- *Traffic activity:* The latest available link data, trips data, and zonal radii data sets extracted from the H-GAC 2011, 2017, 2018, 2020, 2023, 2026, and 2027 TDMs were used. TDM link VMT for the historical analysis years was scaled for consistency with analysis year, seasonally adjusted (summer weekday), HPMS-based, county VMT control totals.
- *Traffic patterns:* TxDOT traffic count data from the area (multiple years through latest available 2019) was used to derive seasonal, day type, and hour of day traffic patterns.
- *HPMS consistency adjustment factor*: HPMS data and validation year TDM data.
- *Base hotelling hours data*: TTI's 2017 hotelling study.[5]
- *Hotelling mode distributions*: MOVES default.

[5] Heavy-Duty Vehicle Idle Activity Study Final Report, prepared by TTI for TCEQ, July 2019.

- *Vehicle starts:* Number of weekday starts per vehicle from MOVES (based on a combination of MOVES default and local data) and local vehicle type population estimates.
- *Vehicle population data*: End of year 2018 vehicle registrations and age class data classified by source use and fuel type provided by Texas Department of Motor Vehicles (TxDMV), scaled to estimate analysis year values using county VMT ratios.
- *Off-network idling*: MOVES default total idle fractions and road idle fractions in combination with local roadway network activity estimates (VMT and speeds).
- *Local fleet mix data:*
    - TxDOT traffic classification data.
    - TxDMV vehicle registrations data.
    - Classified by gasoline- and diesel-powered MOVES source use types.

Emissions inventory Outputs:

The following output files were produced by county in formats required by TCEQ:

- Emissions inventory data files:
    - RFP EI and individual control reductions summaries (spreadsheet file).
    - EI output files – standard tab-delimited, hourly and 24-hour EI summaries by county, MOVES SUT and fuel type combination (or vehicle type), and TDM roadway class.
    - EI extracts – various tab-delimited EI aggregations from the TTI EI utilities standard output.
    - XML-formatted EI summaries – for uploading to TCEQ's TexAER.
- Emissions factor data files:
    - MOVES model input data, build and run files, a well as post-processing adjustment factors (i.e., input data, structured query language [SQL] scripts to load the data into MOVES county input databases [CDBs], CDBs, MOVES run specification [MRS] files, and TxLED NO_X adjustment factors).

1.3.2 RFP Control Reductions

To complete this part of the work, TTI developed emissions reduction estimates for each on-road mobile source control strategy for the 2017, 2018, 2020, 2023, 2026, and 2027 HGB RFP analysis years. The entire MOVES-based control strategy reduction was

subdivided into individual control reductions using a MOVES-based methodology submitted to and approved by the TCEQ Project Manager.

TTI ensured the methods were consistent with the standard Texas on-road mobile source control strategy quantification methods, the EPA's RFP guidance, and TxLED NO_X reductions estimation guidance. Other than for TxLED, the applicable methodology included applying successive individual controls—specifically the FMVCP, fuels, and I/M control strategies—and rerunning the MOVES model to obtain information to individually quantify emissions reductions for each control program/technology. TTI post-processed the emissions reductions for TxLED using methods consistent with TxLED effects estimation guidance. Since MOVES does not separate the reductions from the individual components of the FMVCP such as Tier 1, Tier 2, and the 2007 heavy-duty diesel vehicle certification standard, the effects of FMVCP were calculated as one control reduction.

For the HGB RFP control reduction estimates to be consistent with the requirements for RFP EI analyses, TTI developed the emissions reduction estimates using the same version of the EPA's MOVES model, MOVES3.0.1, and methods and inputs consistent with the RFP EI analyses described in Section 1.3.1.

1.4 Report Structure

This report is further divided into the following sections:

- Section 2 details the data and calculations used to calculate regional on-network and off-network traffic activity.
- Section 3 details the calculation of emission rates via MOVES and subsequent rates modifications.
- Section 4 details the methods used to calculate regional emissions.
- Section 5 completes the narrative with a discussion of quality assurance and quality control.
- The list of references is followed by the set of appendices to complete the report.

2.0 ESTIMATING TRAFFIC ACTIVITY

On-network and off-network activity are required to estimate mobile source emissions. TTI uses a method that calculates on-network emissions using VMT by hour and direction for each link in a TDM. Off-network emissions are calculated using county-level, hourly estimates of activity, including ONI hours, source hours parked (SHP), starts, source hours extended idling (SHEI), and APU hours. Both on- and off-network activity (and emissions) are divided into the various vehicle type components. This section describes the methods used to develop on- and off-network activity.

2.1 VEHICLE MILES OF TRAVEL

The hourly, link-based EI development process requires VMT estimates by hour and direction for each link in the TDM. VMT is adjusted for HPMS consistency and to reflect estimated traffic activity patterns characteristic of a typical seasonal day type scenario (i.e., analysis year summer weekday). Operational (congested) link speed estimates corresponding to these traffic conditions are also required. All calculations were conducted using a suite of EI utilities developed by TTI (see Appendix A).

2.1.1 Data Sources

Directional link VMT and speeds were calculated using the latest available link data, trips data, and zonal radii data sets extracted from the HGB 2011, 2017, 2018, 2020, 2023, 2026, and 2027 TDMs.[6] Since intrazonal VMT are not accounted for in the TDMs, the intrazonal VMT was estimated using the TDM trip matrix and zonal radii data.

Several other data sources were used to adjust the VMT for HPMS consistency and to estimate the season and day type-specific VMT. HPMS VMT estimates[7] were used to adjust the total TDM-based VMT.

Seasonal day type factors derived from local ATR data were used to translate the traffic activity scenario represented by the TDM to those defined by the EI scenario. These seasonal day type factors were estimated using ATR data collected from 2010 through

[6] The 2011 and 2017 TDMs were existing datasets provided previously by H-GAC to TTI for emissions inventory analyses, whereas the 2018, 2020, 2023, 2026, and 2027 TDM data sets were newly provided by H-GAC (spring 2021) for this analysis. All TDM datasets used were the latest available.

[7] HPMS VMT estimates are based on traffic count data collected according to a statistical sampling procedure specified by the Federal Highway Administration (FHWA). The EPA and FHWA have endorsed HPMS as the appropriate source of VMT and require that VMT used to construct on-road mobile source emissions estimates be consistent with that reported through HPMS.

2019. Depending on the application, the data were either combined from the ATR stations within the eight-county region for use with all counties, or from within the Beaumont TxDOT District for use with Chambers and Liberty counties, and from within the Houston TxDOT District for use with Harris, Galveston, Fort Bend, Brazoria, Montgomery, and Waller counties.

2.1.2 Travel Model VMT Adjustments

The following sections describe the steps TTI used to transform TDM-based VMT estimates for each analysis year to the summer weekday hourly VMT estimates required for the emissions analysis.

The TDM VMT was adjusted for HPMS consistency and to represent the summer weekday. For 2011, 2017, and 2018, which by definition are historical years (i.e., HPMS VMT data exists for these years), county-level VMT control totals were used to develop VMT adjustment factors. For 2020, 2023, 2026, and 2027, which are future years (i.e., HPMS VMT data does not yet exist for these years), a regional HPMS factor and summer weekday factors were used. Hourly travel factors were also applied to distribute the link VMT estimates over each hour of each day.

2.1.2.1 Historical Years – VMT Control Totals and VMT Adjustments

To estimate the HPMS-consistent summer weekday VMT for the 2011, 2017, and 2018 historical year scenarios, county-level summer weekday VMT control totals were used to develop VMT adjustment factors for each county and year. The VMT control totals are comprised of two key components: the analysis year county-level HPMS annual average daily traffic (AADT) VMT and the AADT-to-summer weekday adjustment factor.

The AADT-to-summer weekday adjustment factors were developed for each county using aggregated ATR data for the years 2010 through 2019. Since the HGB area spans two TxDOT districts, two summer weekday adjustment factors were developed, one for the counties in the Beaumont TxDOT District, and one for the counties in Houston TxDOT District. These factors were calculated by dividing the average June through August Monday through Friday count by the AADT count. Table 7 shows the HGB district AADT-to-summer weekday factors used in developing the VMT control totals.

Table 7. HGB AADT-to-Summer Weekday Adjustment Factors.

TxDOT District	Weekday Adjustment Factor
Beaumont	1.03336
Houston	1.07307

[1] Only used for Chambers and Liberty counties.
[2] Only used for Harris, Galveston, Fort Bend, Brazoria, Montgomery, and Waller counties.

The VMT control totals were calculated by multiplying the analysis year HPMS AADT VMT for each county by the summer weekday adjustment factors. To develop the county-level VMT adjustment factors, the county's control totals were then divided by the county total VMT (TDM assignment VMT plus intrazonal VMT estimate) from the TDM designated for the analysis year. For each link in the TDM, the volume was multiplied by the corresponding VMT adjustment factor (based on the county where the link was located). The adjusted link volumes were then multiplied by the associated link lengths to produce the analysis year link-level HPMS consistent, summer weekday VMT estimates. This same adjustment was applied to the intrazonal VMT.

2.1.2.2 Future Years – HPMS Adjustment Factor

For the future years, an HPMS adjustment factor was used to adjust the total VMT (TDM assignment VMT plus intrazonal VMT estimate) from each TDM for HPMS consistency. While TTI typically calculates this factor, the HPMS factor used in this analysis (0.938371) was provided directly by H-GAC.

2.1.2.3 Future Years – Summer Weekday Adjustment Factors

Seasonal adjustment factors were used to adjust the future year TDM link and estimated intrazonal VMT to reflect the summer weekday. These adjustment factors were developed using aggregated ATR data for the years 2010 through 2019. Since the HGB area spans two TxDOT districts, two summer weekday adjustment factors were developed. These factors were calculated using local ATR data by dividing the average day-of-week traffic volumes by the average non-summer weekday traffic (ANSWT) volumes. Table 8 shows the seasonal adjustment factors by TxDOT district.

Table 8. HGB ANSWT-to-Summer Weekday Adjustment Factors.

TxDOT District	Weekday Seasonal Adjustment Factor
Beaumont	0.98644
Houston	1.01341

2.1.3 Summer Weekday VMT Summaries

The final HPMS-consistent, VMT is comprised of two parts: the link-level VMT and the estimated intrazonal VMT. For the historical years (2011, 2017, and 2018), the volume for each link was multiplied by the county summer weekday VMT control total-based VMT factor corresponding to the link's county code and by the link's respective length to estimate the link-level summer weekday VMT. For the future years (2020, 2023, 2026, and 2027), the volume on each link was multiplied by the HPMS factor, the summer weekday adjustment factor, and the link's respective length to estimate the link-level summer weekday VMT. These sets of factors were also applied to the associated intrazonal VMT estimates. Table 9 shows the TDM and summer weekday VMT summaries.

Table 9. HGB Summer Weekday County VMT Summaries.

County	2011	2017	2018	2020	2023	2026	2027
Brazoria	6,162,491	8,789,421	9,067,168	9,505,035	9,946,487	10,603,845	10,758,504
Chambers	2,658,258	2,884,385	2,917,999	3,200,135	3,372,234	3,416,170	3,423,817
Fort Bend	10,125,152	13,088,380	13,913,127	15,936,044	17,720,105	19,246,957	19,730,806
Galveston	5,869,213	7,308,748	7,420,160	7,480,017	7,779,087	8,041,908	8,101,603
Harris	104,092,920	121,284,329	124,745,752	129,119,047	135,949,243	141,713,687	143,750,372
Liberty	2,253,804	2,396,281	2,446,129	3,093,346	3,252,779	3,355,538	3,382,329
Montgomery	12,272,514	15,274,852	15,891,927	16,843,097	18,104,578	19,144,967	19,536,904
Waller	2,081,878	2,507,354	2,565,514	2,766,182	3,017,082	3,183,487	3,254,457

[1] Includes intrazonal VMT.

2.1.4 Hourly Travel Factors

Hourly travel factors were used to distribute the TDM and intrazonal VMT to each hour of the day. These hourly travel factors were developed using the multi-year (2010 through 2019) aggregated ATR station data for the eight-county HGB region. To maintain VMT proportions within each of the four assignment time periods, the hourly fractions were normalized within each time period to produce the time period hourly travel factors. Each factor (i.e., 24, or one for each hour of the day) was then multiplied by the link volume (in addition to the other VMT adjustment factors). These adjusted link volumes were then multiplied by their respective link lengths to estimate the link level, summer weekday VMT. These factors were also multiplied by the estimated intrazonal VMT to produce the final hourly, summer weekday VMT. Table 10 shows the summer weekday time period hourly travel factors.

Table 10. Summer Weekday Time Period Hourly Travel Factors.

Assignment	Hour	Base Factor	Time Period Factor[1]
AM Peak	6:00 a.m. to 7:00 a.m.	0.062469	0.334676
AM Peak	7:00 a.m. to 8:00 a.m.	0.066920	0.358522
AM Peak	8:00 a.m. to 9:00 a.m.	0.057266	0.306801
Mid-Day	9:00 a.m. to 10:00 a.m.	0.051661	0.161257
Mid-Day	10:00 a.m. to 11:00 a.m.	0.050387	0.157280
Mid-Day	11:00 a.m. to 12:00 p.m.	0.052108	0.162652
Mid-Day	12:00 p.m. to 1:00 p.m.	0.053986	0.168515
Mid-Day	1:00 p.m. to 2:00 p.m.	0.054713	0.170784
Mid-Day	2:00 p.m. to 3:00 p.m.	0.057509	0.179511
PM Peak	3:00 p.m. to 4:00 p.m.	0.062908	0.241973
PM Peak	4:00 p.m. to 5:00 p.m.	0.067456	0.259467
PM Peak	5:00 p.m. to 6:00 p.m.	0.070399	0.270787
PM Peak	6:00 p.m. to 7:00 p.m.	0.059216	0.227772
Overnight	7:00 p.m. to 8:00 p.m.	0.046370	0.046370
Overnight	8:00 p.m. to 9:00 p.m.	0.036011	0.036011
Overnight	9:00 p.m. to 10:00 p.m.	0.031184	0.031184
Overnight	10:00 p.m. to 11:00 p.m.	0.024436	0.024436
Overnight	11:00 p.m. to 12:00 a.m.	0.016584	0.016584
Overnight	12:00 a.m. to 1:00 a.m.	0.009164	0.009164
Overnight	1:00 a.m. to 2:00 a.m.	0.006058	0.006058
Overnight	2:00 a.m. to 3:00 a.m.	0.005639	0.005639
Overnight	3:00 a.m. to 4:00 a.m.	0.006211	0.006211
Overnight	4:00 a.m. to 5:00 a.m.	0.013328	0.013328
Overnight	5:00 a.m. to 6:00 a.m.	0.038017	0.038017

[1] Used in the hourly VMT calculation process.

2.1.5 Link Speeds

The operational speeds for each link, excluding centroid connectors and the special intrazonal links, were calculated using the Houston speed model. The Houston speed model calculates these speeds using the travel model speed, speed factors (consisting of a free-flow speed factor and level of service [LOS] E speed factor), and a volume-to-capacity (V/C) ratio-based speed reduction factor (SRF) for each link.

The speed factors were used to convert the link-level travel model (input) speed to a free-flow speed and an LOS E speed (i.e., application of these factors results in two speeds). The free-flow speed factors (grouped by functional class and area type) were calculated by dividing the distance-weighted free-flow speed by the distance-weighted input speed for each functional class/area type combination. The distance-weighted free-flow speeds were calculated using output from the detailed speed model used by

H-GAC in the travel model development process (as provided by H-GAC) with link volumes set to 0 (i.e., V/C = 0). The LOS E speed factors were calculated in a similar manner (distance-weighted LOS E speed divided by distance-weighted input speed) using the detailed speed model output with link volumes set equal to capacity (i.e., V/C = 1). Appendix E shows the speed factors and the network functional class and functional group relationship.

The link-specific V/C ratio is calculated as the time period (hourly) volume divided by the time period capacity. The V/C ratio is expressed as:

$$v/c\ ratio = Vh / Ch$$

Where:

- Vh = the hourly link volume (travel model × HPMS factor × seasonal adjustment factor × hourly time period factor; Weekend profile factor is included for Saturday and Sunday).
- Ch = the hourly link capacity (travel model capacity × hourly capacity factor). Appendix E shows the hourly capacity factors.

After the V/C ratio was calculated, the link-specific SRF was determined using the V/C ratio, the link-specific SRF area type, the link-specific SRF functional class, and the SRFs. The SRFs are for V/C ratios of 0 to 1 in 0.05 increments (i.e., 0, 0.05, 0.10, … , 0.95, 1.0). Appendix E shows these SRFs. The link-specific SRF was calculated using linear interpolation. For V/C ratios greater than 1.0, an SRF is not required.

The speed model (for V/C ratios from 0.00 to 1.00) is expressed as:

$$S_{V/C} = S_{0.0} - SRF_{V/C} \times (S_{0.0} - S_{1.0})$$

Where:

- $S_{V/C}$ = estimated directional speed for the forecast V/C ratio on the link in the given direction.
- $S_{0.0}$ = estimated free-flow speed for the V/C ratio equal to 0.0.
- $S_{1.0}$ = estimated LOS E speed for the V/C ratio equal to 1.0.
- $SRF_{V/C}$ = SRF for the V/C ratio on the link. The V/C ratio can be 0.0 to 1.0.

For V/C ratios greater than 1.0 and less than 1.5, the following speed model extension was used:

$$S_{V/C} = S_{1.0} \times (1.15/(1.0 + (0.15 \times (v/c)^4)))$$

Where:

- $S_{v/c}$ = estimated directional speed for the forecast V/C ratio on the link in the given direction.

$S_{1.0}$ = estimated LOS E speed for the V/C ratio equal to 1.0.
v/c = the forecast V/C ratio on the link. The V/C ratio can be 1.0 to 1.5.

For V/C ratios greater than 1.5, the speed was calculated using the previous speed model extension, except the V/C ratio was set to 1.5.

These speed models were applied to all functional classes excluding the centroid connector and intrazonal functional classes. For these functional classes, capacity data were not used. The centroid connector travel model input speeds were used as the centroid connector operational speeds estimates. Operational speeds for the intrazonal functional class were estimated by zone as the average of the zone's centroid connector speeds.

The hourly and 24-hour speed (VMT/vehicle hours traveled [VHT]) summaries by county and road type were provided electronically to TCEQ (see Appendix B for electronic data descriptions).

2.2 Off-Network Activity

Off-network activity includes ONI hours, SHP, starts, and long-haul combination truck hotelling hours (split into various fractions of activity, such as SHEI and diesel APU hours). These quantities are estimated for each hour of the day at a spatial scale of a county and each vehicle type.

2.2.1 Vehicle Population

Vehicle population data was used to estimate SHP and vehicle starts off-network activity. The vehicle population estimates were derived from end of year 2018, county-specific vehicle registration data provided by the TxDMV, TxDOT district level VMT mix data, and HPMS-reported county-level VMT totals.

Scaling factors (VMT ratios) were used with the 2018 vehicle population estimates to produce the vehicle population estimates specific to each of the analysis years.

The end of year 2018 TxDMV vehicle registration data was provided in the form of total vehicles registered by county, aggregated by the vehicle categories shown in the first column of Table 11. These TxDMV vehicle categories were disaggregated to MOVES SUT and fuel type aggregations shown in the corresponding row of the second column of Table 11.

The following steps were used to disaggregate the TxDMV vehicle registration data to vehicle population data by vehicle type:

1) VMT mix data was used to calculate the proportional representation of each MOVES vehicle type within each TxDMV aggregation class (first column of Table 11).
2) The proportional fractions calculated in Step 1 were multiplied by the total number of vehicles reported in each TxDMV vehicle registration category to obtain the estimated number of vehicles (populations) for each modeled MOVES vehicle type.
3) The long-haul truck vehicle type populations (see the last row of Table 11) were estimated as an extension of their estimated short-haul vehicle type population counterparts. This was accomplished by multiplying a long-haul-to-short-haul ratio derived from the weekday vehicle type VMT mix, by the associated short-haul truck vehicle type populations, from Step 2.

The VMT mix data used in these calculations was the TxDOT district-level, 24-hour weekday VMT mix described in more detail in the "Vehicle Type VMT Mix" section and included in Appendix D.

The methods above yielded 2018 vehicle population data for each of the vehicle types modeled in the EIs.

Analysis year vehicle type populations were then calculated by applying a vehicle types population growth factor (VPGF). The VPGF was calculated using county-level HPMS reported total VMT for the registration data year (2018) and each analysis year (2011, 2017, 2018, 2020, 2023, 2026, and 2027):

$$VPGF = Analysis\ Year\ VMT / Registration\ Year\ VMT$$

Table 11. TxDMV Registration Aggregations for Estimating Vehicle Populations.

Vehicle Registration[1] Aggregation	Associated Vehicle Type[2]
Motorcycles	MC_Gas
Passenger Cars (PC)	PC_Gas; PC_Diesel
Trucks ≤ 8.5 K gross vehicle weight rating (GVWR, in pounds)	PT_Gas; PT_Diesel; LCT_Gas; LCT_Diesel
Trucks > 8.5 and ≤ 19.5 K GVWR	RT_Gas; RT_Diesel SUShT_Gas; SUShT_Diesel MH_Gas; MH_Diesel OBus_Gas: OBus_Diesel TBus_Gas; TBus_Diesel SBus_Gas; SBus_Diesel
Trucks > 19.5 K GVWR	CShT_Gas; CShT_Diesel
NA[1]	SULhT_Gas; SULhT_Diesel CLhT_Gas; CLhT_Diesel

[1] The four long-haul SUT/fuel type populations are estimated using a long-haul-to-short-haul weekday SUT VMT mix ratio applied to the short-haul SUT population estimate.

[2] The year-end TxDMV county registrations data extracts were used (consisting of: 1—light-duty cars, trucks, and motorcycles; 2—heavy-duty diesel trucks; and 3—heavy-duty gasoline trucks) for estimating the vehicle populations.

2.2.2 ONI Hours

Off-network idling, or ONI, is idling activity that occurs while a vehicle is idling in a parking lot, drive-through, driveway, while waiting to pick up passengers, or loading/unloading cargo. ONI applies to all MOVES source types.

TTI estimates ONI activity (i.e., source hours idling [SHI] off-network) for each hour of the day using the following formula:

$$ONI\ Hours = (SHO_{network} \times TIF - SHI_{network}) / (1 - TIF).$$

Where:

- $SHO_{network}$ is the source hours operating on each link. This is calculated by dividing the VMT associated with each link by the link's congested speed.
- $SHI_{network}$ is the total source hours idling that occurs on the network (idling that occurs as a component of drive cycles) and is calculated by multiplying $SHO_{network}$ by a road idle fraction (RIF). RIF is the proportion of idling (in units of time) that occurs within a drive-cycle at a specified operational speed. Default values for RIF were used as defined in the MOVES data table "roadidlefraction".

TIF is the total idle fraction, or total idling time on and off-network, divided by total SHO on and off-network: $TIF = (SHI_{network} + ONI) / (SHO_{network} + ONI)$. Default values for TIF were used as defined in the MOVES data table "totalidlefraction".

TTI estimated the summer weekday ONI hours by vehicle type using a combination of the MOVES SUT factors that vary by MOVES day type and/or month (i.e., roadidlefraction and June-July-August average totalidlefraction) in combination with local summer weekday activity factors.

2.2.3 SHP

County-level, vehicle type SHP was calculated for each hour of the summer weekday as the difference, by vehicle type, between the local vehicle population (total available vehicle hours) minus summer weekday source operating hours (SHO).

Adjusted SHP was then calculated by subtracting ONI hours from the previously calculated SHP. Appendix E summarizes county-level 24-hour summer weekday adjusted SHP by vehicle type for each analysis year. Hourly summaries were provided electronically to TCEQ; see Appendix B for electronic data descriptions.

2.2.4 Vehicle Starts

Vehicle starts were estimated using county-level vehicle type populations, and data from MOVES representing the average number of vehicle starts per vehicle type per hour for the summer weekday.

The starts per vehicle type per hour were calculated using MOVES with data on the age distribution and fuel fractions of the local fleet[8]. TTI used local age distributions and fuel fractions inputs to MOVES combined with MOVES default parameters (startsageadjustment, startsmonthadjust [June through August average], and startspervehicle) to produce hourly starts per vehicle output representative of the June through August summer period and the weekday day type.

For each hour of the day, the MOVES summer weekday starts per vehicle output data were multiplied by the local vehicle type population estimates to produce the total

[8] Previously with MOVES2014, TTI used MOVES default start per vehicle (which varied only by MOVES day type) in combination with local vehicle populations to estimate vehicle starts activity. In MOVES3, vehicle starts per hour also vary by county (because age distributions also vary by county).

number of starts by vehicle type per hour of the average summer weekday. The 24-hour summaries by year, county, and vehicle type are summarized in Appendix E.

2.2.5 Hotelling: SHEI and APU Hours

Hotelling hours were calculated for heavy-duty, long-haul trucks only (i.e., SUT 62[9]) in several steps. First, the base, total hotelling hours were calculated using information from a TCEQ extended idling study[10]. Scaling factors were then used to convert these base hotelling hours to those relevant to each EI scenario (defined by analysis year, season, and day type); and hourly factors were applied to allocate to each hour of the day. Estimates were then made of the proportions of hotelling hours that occur in each of the four hotelling categories: idling using the main engine (SHEI), diesel APU operation, electric APU operation, or main engine off and no auxiliary power[11].

2.2.5.1 24-Hour Hotelling

County-level hotelling scaling factors were developed to transform base 2017 winter weekday total daily hotelling hours to daily hotelling hours for each EI scenario. Scaling factors were calculated using the ratio of heavy-duty long haul VMT for a 2017 winter weekday relative to heavy-duty long haul VMT for each EI scenario (scenario SUT 62 VMT divided by 2017 winter weekday SUT 62 VMT).

Total daily hotelling for each county and EI scenario was calculated by multiplying the appropriate scaling factor by the total daily hotelling hours from the 2017 winter weekday total daily hotelling hours study.

2.2.5.2 Hotelling by Hour

Daily hotelling hours were allocated to each hour of the day as a function of the inverse of the activity scenario hourly VHT fractions for SUT 62. The hourly VHT fractions were calculated using the hourly VHT from the SHP estimation process (VHT = SHO). The inverses of these hourly VHT fractions were calculated and then normalized across all hours to produce the county-level, hotelling hours hourly distribution.

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[9] SUT 62 represents long-haul combination trucks, for which only diesel fuel types are modeled.

[10] *Heavy-Duty Vehicle Idle Activity Study, Final Report*. Texas A&M Transportation Institute, Environment and Air Quality Division. July 2019. https://www.tceq.texas.gov/assets/public/implementation/air/am/contracts/reports/mob/582177430806-20190722-TTI-HeavyDutyIdleActivityStudyFinal.pdf

[11] Note that only SHEI and APU diesel hoteling generate emissions. The other fractions are calculated for completeness.

If the hourly hotelling hours (as calculated above) were greater than SHP (for SUT 62), the final hotelling hours estimate was set to the SHP.

2.2.5.3 SHEI and APU Hours

The hourly, county-level, hotelling estimates were then factored to calculate SHEI and diesel APU hours activity components using extended idle and APU fractions. The SHEI and APU fractions were derived using MOVES defaults based on SUT 62 model year data. The updated MOVES SHEI and APU hotelling distributions[12] are shown in Table 12. Note that only SHEI and diesel APU are used to calculate emissions.

Table 12. Hotelling Activity Distributions by Model Year and Operating Mode Fraction.

First Model Year	Last Model Year	200 ExtendIdling	201 Diesel Aux	203 Battery AC	204 APU Off
1960	2009	0.80	0	0	0.20
2010	2020	0.73	0.07	0	0.20
2021	2023	0.48	0.24	0.08	0.20
2024	2026	0.40	0.32	0.08	0.20
2027	2050	0.36	0.32	0.12	0.20

2.3 Vehicle Type VMT Mix

VMT mix represents the fraction of on-road fleet VMT attributable to each SUT by fuel type. It is used to subdivide the total VMT estimates on each link into VMT by vehicle type. Hourly VMT estimates by vehicle type are combined with the appropriate emissions factors in the link-emissions calculations.

VMT mixes were calculated and applied at the scale of:

- Each TxDOT District.
- Each analysis year (EI years).
- Each MOVES roadway type.
- Day Type (Weekday).
- Four time periods per day (AM peak, midday, PM peak, and overnight).

[12] Current MOVES3 defaults (previously adopted while in draft stage for use in the TCEQ 2017 truck extended idling study).

VMT mixes were calculated using local vehicle classification count and ATR data, MOVES defaults, and local registration data. Figure 1 shows a simplified view of the method used to estimate VMT mix[13], which includes the following steps (numbered in Figure 1):

1. MOVES – Data files of MOVES default values extracted from MOVES databases or pro forma runs.
2. TxDOT Classification Counts – Data files of standard TxDOT classification data assembled and used for determining the in-use road fleet mix.
3. TxDMV Registration Data – Data files of standard TxDMV vehicle registration summary data assembled and used for determining the in-use road fleet mix.
4. TxDOT ATR Data – Data files of TxDOT ATR data assembled and used to allocate VMT by season and day of week.
5. Single Unit Local vs. Total SUT_HDVyy – Procedure based on registration data to generate factors to separate Single Unit versus Combined Unit trucks by region. (SUT_HDVyy has multiple outputs based on vehicle category and fuel.)
6. Combination Local vs. Total SUT_HDXyy – Procedure based on MOVES default data to generate short-haul and long-haul combination truck proportions by region. This step is not used in the updated procedure for MOVES3.
7. Day of Week (DOW) Factors by Urban Area/TxDOT District – Seasonal day-of-week factors from TxDOT ATR data used to allocate VMT by season and day-of-week by urban area/TxDOT district.
8. Single Unit Short-Haul vs. Long-Haul SUT_SSHZ – Procedure to separate single unit short-haul versus single unit long-haul using factors generated at SUT_HDVyy and classification count data. Short-haul and long-haul are functionally defined as local and pass-through.
9. Combination Short-Haul vs. Long-Haul SUT_CSHZ – Procedure to separate combined short-haul versus combined long-haul using factors generated using MOVES defaults and classification count data. Short-haul and long-haul are functionally defined as local and pass-through.

[13] *Developing MOVES Source Use Types and VMT Mix for Conformity Analysis* (TxDOT Air Quality / Conformity IAC-A - TTI Task 409252-0643: Maintain, Update and Enhance Traffic Activity Estimation and Forecasting Methods), Texas Department of Transportation, Austin, TX, August 2016.

10. PV and LDT Fuel MF_Fuelyy – Procedure to generate passenger vehicle and light truck fuel allocation by year based on MOVES national default values and local registration data.
11. Single Unit and Combination Truck Fuel SUT_HDVyy – Procedure to generate single unit and combined truck fuel allocation factors from registration data. (SUT_HDVyy has multiple outputs based on vehicle category and fuel.)
12. SUT_yyddtt – Procedure to generate SUT proportions by year, day type, and time period, based on the previous steps.
13. MOVES SUTs – Output file of MOVES SUTs by region, analysis year, day type, and time period. For MOVES3, P_ICB41D is renamed P_OB41D (per the redefined MOVES3 category equivalent to the previous MOVES2014 category), and P_OB41G is added and set to zero (since we have no data to support the proportion of the "Other Buses" category that is gasoline-fueled).[14]

[14] Specifically, the intercity bus category (ICB41) is redefined and renamed "Other Buses" (OB41). Intercity bus was previously considered diesel only. While there is currently no data available to determine the proportion, or even existence of gas fueled "Other Buses" vehicles, the category is necessary to be consistent with MOVES3. Pending additional data, "Other Buses" (OB41) is treated as equivalent to "Intercity Bus" (ICB41) and a placeholder "null" gasoline fueled "Other Buses" (OB41G) is added. The rest of the procedure is identical to the current VMT mix procedure. Thus, these measures and procedures, as modified, provide a functional, hybrid region-specific, disaggregate link-level application of MOVES3 to the extent possible with the data currently available. This hybrid is consistent with previous applications in terms of activity inputs and fleet data.

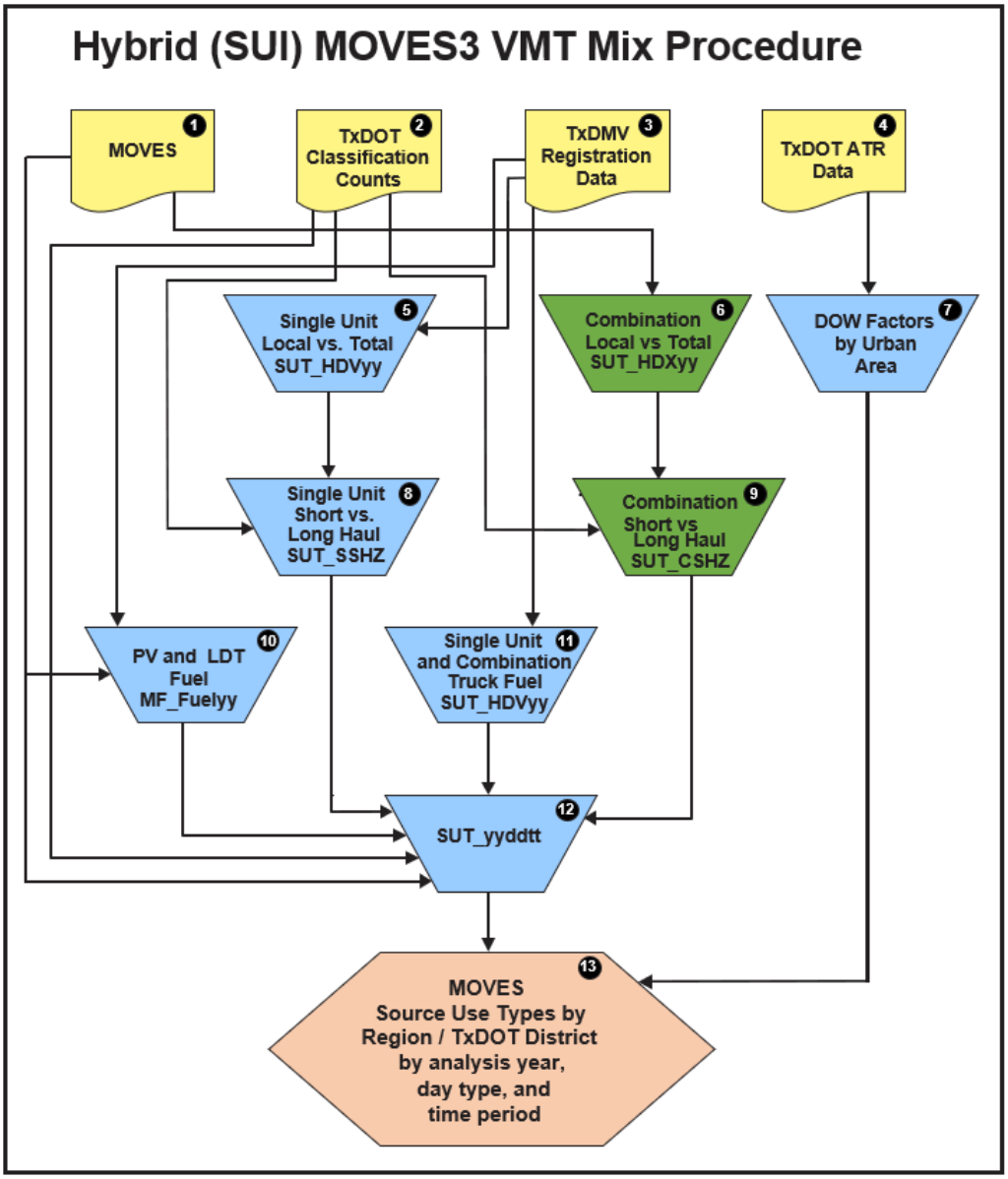

Figure 1. Simplified Overview of the VMT Mix Process.

Using the same data sets and a similar procedure, aggregate (i.e., all road-type categories), TxDOT district-level weekday vehicle type VMT mixes (used in the vehicle population estimation process) were also produced. To ensure general applicability and consistency across all study areas, all VMT mixes were developed in five-year increments beginning with the year 2005 and applied to the analysis years based on Table 13.

Table 13. VMT Mix Year/Analysis Year Correlations.

VMT Mix Year	Analysis Years
2005	2003 through 2007
2010	2008 through 2012
2015	2013 through 2017
2020	2018 through 2022
2025	2023 through 2027
2030	2028 through 2032
2035	2033 through 2037
2040	2038 through 2042
2045	2043 through 2047
2050	2048 through 2050

3.0 EMISSION RATES

This section describes the development of the emission rates (for each pollutant). The emission rates were calculated using EPA's MOVES3 emissions factor model parameterized using local and default data. The resulting MOVES3 emission rates were then post-processed using TTI's EI utilities to yield the emission rates used to calculate total emissions. The emission rates were developed based on the *TTI Emissions Inventory Utilities User's Guide* methods and procedures but updated as needed to accommodate MOVES3 and EPA's *Technical Guidance*[15] applicable to MOVES3 inventory development. Special techniques were employed to model emission rates for particular RFP control scenarios.

This initial focus is on the general emission rates development process used for both of the RFP scenarios (i.e., current controls and pre-1990 controls) and the extra incremental individual control scenarios. The final section provides the details on differences in the inputs between all the scenarios and the stepwise development procedure starting with pre-1990 controls, stepping through adding individual controls, and finishing with the current control scenario.

3.1 OVERVIEW

MOVES emission rates mode runs were developed to produce MOVES output databases containing emissions and activity data (some of which were used during the activity estimation methods described previously). Data contained in each MOVES output database was then post-processed into the final on-road emission rates used in each EI.

Emission rates were developed for the summer weekday. These emission rates were then used with the traffic activity levels characteristic of the average summer weekday time period to calculate the full EI.[16]

Moves output rates were post processed using an on-road rates look-up table post-processor utility to convert rates into the units defined by the on- and off-network activity detailed in the previous section (emissions per mile for VMT, emissions per start

[15] EPA. 2020. *MOVES3 Technical Guidance: Using MOVES to Prepare Emission Inventories for State Implementation Plans and Transportation Conformity*, EPA-420-B-20-052, Office of Transportation and Air Quality. November 2020.

[16] Separate emission rates are needed by MOVES day type, since some emission rate output varies by day type (e.g., start emission rates, due to different weekday versus weekend cold start distributions by hour of day).

for vehicle starts, emissions per SHP, etc.). Table 14 defines the rates produced for the external inventory calculations relative to traffic activity measures.

Additional post processing was done to the rates to adjust diesel NO_X rates to account for the TxLED fuel (a pre-2011-implemented control measure) used in each HGB county.

Table 14. Emission Rates by Emissions Process and Activity Factor.

MOVES Emissions Process	Activity[1]	Emission Rates[2]
Running Exhaust	VMT	mass/mile (mass/mi)
Crankcase Running Exhaust	VMT	mass/mi
Brake Wear	VMT	mass/mi
Tire Wear	VMT	mass/mi
Start Exhaust	Starts	mass/start
Crankcase Start Exhaust	Starts	mass/start
Extended Idle Exhaust	SHEI	mass/hour
Crankcase Extended Idle Exhaust	SHEI	mass/hour
Auxiliary Power Exhaust	APU Hours	mass/hour
Running exhaust – Road Type 1 off-network	ONI Hours	mass/hour
Evaporative Permeation Evaporative Fuel Vapor Venting Evaporative Fuel Leaks	VMT, SHP	mass/mi, mass/hour

[1] VMT, ONI hours, SHP, vehicle starts, and hotelling activity (SHEI and APU hours) are the basic activity factors. SHEI and APU hours are for combination long-haul trucks only.

[2] All mass per activity rates shown are available in MOVES rates table output, except for mass/SHP, which is produced using the TTI EI utility.

ThIs RFP inventory analysis required sets of emissions factors for the two main RFP control scenarios: pre-1990 controls, and control strategy (or current controls). The difference between pre-1990 controls and control strategy emissions is the emissions reductions due to the combined effects of individual post-1990 CAAA controls.

For calculating emissions reductions from individual post-1990 controls measures, extra MOVES runs were needed. The set-ups for these runs added post-1990 FMVCP, RFG, I/M, and TxLED effects sequentially to the pre-1990 controls set-ups. Rates from these runs were used in estimating the individual control program emissions reductions for 2017, 2018, 2020, 2023, 2026, and 2027 analysis years.

The five control scenarios (with labeling as used in the modeling files) are:

- "CS0" – Pre-1990 Controls scenario.
- "CS1" – CS0 + post-1990 FMVCP.
- "CS2" – CS1 + RFG.
- "CS3" – CS2 + I/M Program.

- "CSC" – CS3 +TxLED fuel (i.e., current control strategy scenario).

Table 15 shows the control measures modeled in the two RFP control scenarios.

Table 15. Control Measure Modeling by RFP Control Scenario.

Individual Control Measures[1]	Method	RFP Pre-1990 Controls (CS0)	RFP Control Strategy (CSC)
Pre-1990 CAAA FMVCP	MOVES inputs	√	√
1992 Federal Controls on Gasoline Volatility	MOVES inputs	√	
RFG	MOVES inputs		√
Post-1990 CAAA FMVCP Tier 1 National Low Emission Vehicle Program Tier 2 Tier 3 Heavy-Duty 2004 Diesel 2005 Gasoline 2007 Gasoline and Diesel Highway Motorcycle 2006 Light- and Medium-Duty 2010 Cold Weather Light- and Heavy-Duty Greenhouse Gas (GHG)	MOVES inputs		√
I/M Program	MOVES inputs		√
TxLED Fuel	Post-process diesel vehicle NO_X rates		√

[1] For the pre-1990 scenario, MOVES diesel and gasoline property inputs reflected pre-1990 diesel sulfur and pre-1992 conventional gasoline with 1992 summer Reid vapor pressure [RVP] limit promulgated prior to the enactment of the 1990 CAAA. For the control strategy scenario, MOVES gasoline and diesel inputs reflected Ultra Low Sulfur Diesel (ULSD), RFG for 2017 consistent with the actual, summer 2017 Houston RFG survey data, and for later years, the latest available (2020 survey-based) RFG inputs except with sulfur set to the Tier 3 sulfur (10 ppm) standard; Post-1990 FMVCP all together, per MOVES limitation; I/M for Harris, Brazoria, Fort Bend, Galveston, and Montgomery Counties; and TxLED effects adjustment to diesel vehicle NO_X emissions for all counties.

The following sections describe the emission rates development process in terms of MRS files and CDB inputs, executing MOVES emission rates runs, and post-processing, with the focus mainly on current controls. The last section finishes with the details involving pre-1990 controls and incremental individual control emission rates modeling procedures and inputs.

3.2 MOVES Run Specifications

The MOVES Run Specification (MRS) is a file (in XML format) that defines the place, time, road categories, vehicle and fuel types, pollutants and emissions processes, and the overall scale and level of output detail for the modeling scenario. TTI created an MRS for one county and scenario using the MOVES graphical user interface (GUI), then converted the MRS to a template from which all the required MRS files were built. Table 16 describes the MRS selections used, followed by sections describing the input data used per selection.

Table 16. MRS Selections by MOVES GUI Panel.

Navigation Panel	Detail Panel	Selection
Scale[1]	Model; Domain/Scale; Calculation Type	On-Road; County; Emission Rates
Time Spans[1]	Years – Months – Days – Hours	***<YEAR>*** - ***<MONTH>*** - ***<DAY-TYPE>*** - All
Geographic Bounds[1]	States; Counties; Selections	Texas - ***<COUNTY>***;[1] ***<TX COUNTY SELECTION>***
On-Road Vehicles[2]	SUT/Fuel Combinations: 1 – Gasoline, 2 – Diesel, 3 – Compressed natural gas (CNG), 5 – E85 (85% ethanol-15% gasoline blend), 9 – Electric	SUT: — Fuel Types: 1 / 2 / 3 / 5 / 9 Motorcycle: 1 - - - - Passenger Car: 1 2 - 5 9 Passenger Truck: 1 2 - 5 9 Light Commercial Truck: 1 2 - 5 9 Other Buses: 1 2 3 - - Transit Bus: 1 2 3 - - School Bus: 1 2 3 - - Refuse Truck: 1 2 3 - - Single Unit Short-Haul Truck: 1 2 3 - - Single Unit Long-Haul Truck: 1 2 3 - - Motor Home: 1 2 3 - - Combination Short-Haul Truck: 1 2 3 - - Combination Long-Haul Truck: - 2 - - -
Road Type	Selected Road Types	Off-Network – Rural Restricted Access – Rural Unrestricted Access – Urban Restricted Access – Urban Unrestricted Access
Pollutants[3] and Processes	VOC; CO; NO_X; Atmospheric CO_2; SO_2; NH_3; $PM_{2.5}$: Total Exhaust, Brakewear, and Tirewear; PM_{10}: Total Exhaust, Brakewear, and Tirewear	Dependent on pollutant: Running Exhaust, Start Exhaust, Extended Idle Exhaust, Auxiliary Power Exhaust, Crankcase Running Exhaust, Crankcase Start Exhaust, Crankcase Extended Idle Exhaust, Evap Permeation, Fuel Vapor Venting, Fuel Leaks; Brakewear, Tirewear
General Output	Output Database; Units; Activity	***<MOVES OUTPUT DATABASE NAME>***;[1] Grams, KiloJoules, Miles; Distance Traveled, Hotelling Hours, Population, Starts
Output Emissions Detail	Output Aggregation; For All Vehicles/Equipment; On-Road	Time: Hour, Geographic: Link; Fuel Type, Emissions Process; Road Type, Source Use Type
Create Input Database	Domain Input Database	***<COUNTY DATABASE (CDB) INPUT NAME>***[1]
Advanced Features	Aggregation and Data Handling	Only the "clear BaseRateOutput after rate calculations" box is checked

[1] Limited to one county per County Scale run. County Federal Information Processing Standards (FIPS) code, year, and season/day type labels were included in the MRS file and output database names.
[2] Although MOVES requires all fuel types to be included in MRSs, only gasoline and diesel were modeled.
[3] Pre-requisite pollutants that were needed to model the reported pollutants are not shown.

3.2.1 Scale

The MOVES Domain/Scale "County" was selected as is required for SIP inventory estimates. The MOVES Calculation Type "Emission Rates" was selected for MOVES to produce the emissions rates with speed bin indexing, as needed for the link-based inventory estimation process.

3.2.2 Time Spans

The Time Spans parameters were specified to provide the most detail available, which is the hourly aggregation level, for all hours of the day, for the selected year, month, and day type. One analysis year (2011, 2017, 2018, 2020, 2023, 2026, or 2027) was selected, and one "Months" (July) and one "Days" (Weekdays) selection was made. The July weekday MRS selection together with the other MOVES inputs and MRS settings produced emission rates for the average June through August weekday.

3.2.3 Geographic Bounds

Per the MOVES County Scale, only one county was selected per run.

3.2.4 On-Road Vehicles and Road Type

The local VMT mixes developed for the study include the SUT/fuel type combinations modeled with MOVES, namely, gasoline and diesel. The VMT mixes specify the vehicle fleet as the gasoline and diesel SUTs designated as "on-road vehicles" selections in Table 16. These SUT/fuel type combinations were selected in all the MRSs. All other SUT/fuel type combinations available in MOVES were also selected as required by MOVES, but only gasoline and diesel were modeled. Fuel types output was controlled through adjustments to the MOVES default fuel engine fractions via the MOVES Alternate Vehicle and Fuel Technology (AVFT) table and to the MOVES default flex fuel vehicle fuel type usage fractions in the MOVES fuelusagefraction table (discussed later). All five MOVES road type categories were selected.

3.2.5 Pollutants and Processes

In addition to the required pollutants within the scope of the inventory, MOVES requires that additional pollutants be selected for "chained" pollutants (i.e., pollutants that are calculated as a function of another MOVES pollutant). Of the pollutants listed for the inventory, the following additional pollutants were selected, as required by the model,

due to chaining: non-methane hydrocarbons and total gaseous hydrocarbons (for VOC); total energy consumption (TEC) (for CO_2 and SO_2); and Composite – NonECPM, Elemental Carbon, H_2O (aerosol), and sulfate for Primary Exhaust $PM_{2.5}$ - Total. All of the associated on-road processes available by the selected pollutants were included; the two area source refueling emissions processes were.

3.2.6 Output Features

The output units were grams, kilojoules, and miles. The activity categories were pre-set by MOVES rates mode (and not adjustable) for inclusion in the output database. The selected output detail level was by hour, link (in MOVES rates mode "link" is the combination of county, road type, and speed bin), pollutant, process, road type, SUT, and fuel type.

The MOVES model produces results at different aggregation levels that are selected in the MRS. The detailed, hourly, link-based inventory method required MOVES weekday day-type rates at the following MOVES output detail level:

- Source use types.
- Fuel types.
- Road type (four actual MOVES road categories and off-network).
- Hours of day.
- Speed bin (16 - in miles-based rate tables).
- Pollutants.
- On-road emissions processes.

For each EI scenario, the vehicle fleet fuel types were modeled using only the predominant on-road fuels of gasoline and diesel (alternate fuels were considered de minimis). The five road type categories in MOVES are Off-Network[17], Rural Restricted Access, Rural Unrestricted Access, Urban Restricted Access, and Urban Unrestricted Access. The rates for each of the actual four MOVES road types are indexed by the 16 MOVES speed bin average speeds: 2.5, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, and 75 mph.

[17] The Off-Network road type is not a 'real' road type and is instead used as a placeholder to define off-network emissions.

3.3 MOVES County Input Databases

MOVES CDBs were created for each county and year. The CDBs were populated with local input data (such as local fleet age distributions, fuel formulations, meteorological conditions) as well as MOVES defaults.

TTI developed procedures to build and check each CDB. The basic procedure was to write a MySQL script to produce one county scenario CDB and convert it to a template from which all of the CDB scripts were built. The scripts were then run in batch mode to produce all CDBs for the analysis.

Data for populating the CDBs were first prepared in the form of text files and/or MySQL databases (e.g., for local fuels, weather data), and some values were provided directly in the CDB builder MySQL script. Any default data used was selected from the MOVES default database, MOVESDB20210209. After running the scripts to produce the CDBs, the CDBs were checked to verify all CDB tables were built and populated as intended.

Table 17 provides an outline and brief description of the CDBs, followed by a discussion of the development of the local data and the defaults contained therein. Unless otherwise stated, the CDB table data applies to all counties and years. Specific differences in inputs by RFP and incremental control scenarios are discussed in a later section.

Table 17. CDB Input Tables.

Table	Data Source	Notes
auditlog	empty table used	Table must be present for MOVES to recognize CDB
year	MOVES default	Sets analysis year as base year (i.e., activity inputs supplied, not forecast by MOVES)
state	MOVES default	Identifies the state and idle region
hourvmtfraction	MOVES default	Hourly VMT fractions by source type, road type, day type
dayvmtfraction	MOVES default	Weekend and weekday period VMT fractions by month for each source type and road type
monthvmtfraction	MOVES default (3-month average)	Month VMT fractions by source type
hpmsvtypeyear	MOVES default	Annual VMT by HPMS vehicle type
roadtypedistribution	MOVES default	Source type VMT fractions by MOVES road type
avgspeeddistribution	MOVES default	Driving time fractions by speed bin for each source type, road type, day type, hour
sourcetypeyear	MOVES default	Source type populations
startsperdaypervehicle	MOVES default	Average starts per day by source type and day type
startshourfraction	MOVES default	Average hourly allocation of starts by source type and day type
startsmonthadjust	MOVES default (3-month average)	Average monthly multiplicative adjustment to startspervehicleperday
startsageadjustment	MOVES default	Source type starts by vehicle age relative to the number of starts at age 0 (lower frequency of starts with age)
startsopmodedistribution	MOVES default	Distribution of engine start soak times by source type, age, day type, hour
totalidlefraction	MOVES default (3-month average)	Ratio of total source hours idling (SHI) and total source hours operating (SHO) for each source type by month, day type, idle region, county type (Metropolitan Statistical Area [MSA] or non-MSA)
hotellingactivitydistribution	MOVES default	Allocation of hoteling to four operating modes by zone (e.g., county) and model year group
hotellingagefraction	empty table used	Hourly hoteling distribution by age for each zone and day type – included to preempt commandline execution errors
hotellinghourfraction	empty table used	Zone and day type hoteling hourly allocations – included to preempt commandline execution errors
hotellinghoursperday	empty table used	Year, zone, day type hoteling hours – included to preempt commandline execution errors
hotellingmonthadjust	empty table used	Hotelling monthly adjustment for each zone and month – included to preempt commandline execution errors
zone	MOVES default (set factors = 1)	SHO geographic allocation factors, set to 1.0 for county scale runs
zoneroadtype	MOVES default (set factors = 1)	Road type VMT allocation factors to county road type VMT, set to 1.0 for county scale runs

Table	Data Source	Notes
fuelusagefraction	Local	Flex fuel vehicle fuel type usage, set for Texas modeling assumption: flex fuel vehicles operate totally on gasoline
fuelsupply	Local /defaults	Market shares of fuel formulations set to reflect Texas modeling assumptions of gasoline and diesel only, although all MOVES default alternative fuels were also included as required to run MOVES3 (i.e., CNG, E85, and electric were included but not used as specified by AVFT and fuel usage configurations)
fuelformulation	Local /defaults	Gasoline and diesel formulations by fuel region based on Texas regional survey data and defaults as needed, with MOVES default CNG, E85, and electric as required to run MOVES3
avft	Local /defaults	Set for Texas modeling assumptions, i.e., gasoline and diesel only, but also include default flex fuel vehicle fractions which are set to 100% gasoline use via the fuelusagefraction table
sourcetypeagedistribution	local/default (actual analysis year default)	Distribution by 31 age categories for each source type, based on latest available county vehicle registrations, and MOVES defaults where needed (i.e., for buses, refuse trucks, motor homes)
imcoverage	local	Empty for non-I/M counties, or includes I/M program modeling parameters characterizing the local program applicable to the county, to include updated compliance factors based on TCEQ I/M program statistics for Houston
county	local	Identifies the county, barometric pressure, high or low altitude, and whether the county is an MSA or non-MSA county
zonemonthhour	local	Provides zone hourly temperatures and relative humidity by month using month ID 7 (July) to represent the summer season (populated with local June through August averages)
countyyear	local	Stage II refueling control program adjustments, set to zero to reflect the program is no longer in effect (applicable to area sources and does not affect on-road emission rates, but is included as a standard practice)

3.3.1 Year, State, and County Inputs

The year, state, and county tables are populated with data identifying the analysis year, state, and county of the run.

The yearID field of the "year" table was populated with the analysis year value, and the year was set as a base year (to specify that certain user-input fleet and activity data were to be used, rather than forecast by MOVES during the model runs). As part of designating the appropriate fuel supply for the modeling scenario, the fuelyearID in the year table was also set to the analysis year. With MOVES3, an idleregionID was added to modify the state table.

StateID "48" (Texas) was inserted in the state table. In addition to identifying the county of analysis, the county table contains barometric pressure, and altitude information (discussed further with other meteorological inputs). The county data were selected from a prepared local "meteorology" database containing tables of weather data records for the analysis. Additionally, information on whether the county is in an MSA is included in the county table.

3.3.2 Activity and Vehicle Population Inputs

The TTI EI methodology uses an emission rate by activity method that calculates emissions by multiplying local activity estimates and MOVES-based emission rates external to MOVES. However, MOVES rates mode CDBs require activity inputs in order to calculate the emission rates per activity estimates used in the TTI EI method.

For this reason, default activity input parameters were used to populate the following MOVES tables: hourvmtfraction, dayvmtfraction, monthvmtfraction, hpmsvtypeyear, roadtypedistribution, avgspeeddistribution, sourcetypeyear, startsperdaypervehicle, startshourfraction, startsmonthadjust, startsageadjustment, startssopmodedistribution, totalidelfraction, and hotellingactivitydistribution. Data for all these tables were selected and inserted from the MOVES default database. In the case of the startsmonthadjust and totalidlefraction, which vary by month, the MOVES default data were averaged for the three-month summer season period (same for MOVES default monthvmtfraction, for consistency).

The zone and zoneroadtype tables contain zonal sub-allocation activity factors. For county scale analyses, county is equal to zone; therefore these allocation factors were set to 1.0.

3.3.3 Age Distributions and Fuel Engine Fractions Inputs

Local age distributions, or age fractions for each SUT, and local fuel fractions by SUT and model year (or technology), were used, in conjunction with MOVES defaults as needed.

These data were sourced from TxDMV 2018 year-end registration data for each county (this data was used for each analysis year). The age distributions and fuel engine fractions inputs were calculated and written to text files in preparation for loading the data into their CDB tables: the sourcetypeagedistribution table for age distributions and the avft table for fuel engine fractions.

The local TxDMV registration data provides fuel type fractions (proportion of gasoline or diesel-powered vehicles) for heavy-duty vehicles but does not for light-duty vehicles. MOVES default fuel fractions were therefore applied to estimate light-duty fuel fractions. Only gasoline and diesel vehicles were explicitly included in the CDBs[18].

Table 18 summarizes the data sources and aggregation levels used to estimate the local sourcetypeagedistribution and avft inputs to MOVES (inputs summarized in Appendix G).

[18] This was decided after consultation with the TCEQ sponsor.

Table 18. Sources and Aggregations for Age Distributions and Fuel Fractions.

SUT Name	SUT ID	TxDMV Category[1] Aggregations for Age Distributions and Fuel/Engine Fractions	Geographic Aggregation for Age Distributions	Geographic Aggregation for Fuel/Engine Fractions[2]
Motorcycle	11	Motorcycles	County	n/a – 100% gasoline, no Fuel/Engine Fractions
Passenger Car	21	Passenger Cars	County	MOVES default[2]
Passenger Truck	31	Total Trucks<=8500	County	MOVES default[2]
Light Commercial Truck	32	Total Trucks<=8500	County	MOVES default[2]
Single-Unit Short-Haul Truck	52	>8500+ >10000+ >14000+>16000	Region	Texas Statewide
Single-Unit Long-Haul Truck	53	>8500+ >10000+ >14000+>16000	Texas Statewide	Texas Statewide
Refuse Truck	51	MOVES default[3]	MOVES default[3]	MOVES default[3]
Motor Home	54	MOVES default[3]	MOVES default[3]	MOVES default[3]
Other Buses	41	MOVES default[3]	MOVES default[3]	MOVES default[3]
Transit Bus[2]	42	MOVES default[3]	MOVES default[3]	MOVES default[3]
School Bus	43	MOVES default[3]	MOVES default[3]	MOVES default[3]
Combination Short-Haul Truck	61	>19500+ >26000+ >33000+ >60000	Region	Texas Statewide
Combination Long-Haul Truck	62	>19500+ >26000+ >33000+ >60000	Texas Statewide	n/a – 100 % diesel, no Fuel/Engine Fractions

[1] TxDMV year-end 2018 (latest available, used for all years) county vehicle registrations data were used for developing local inputs (weights are GVWR in units of pounds). The MOVES model default age distributions were from the MOVESDB20210209 database.

[2] MOVES fuel engine fraction defaults (for gasoline, diesel, E85 capability) were used for light-duty SUTs (with E85 use set to zero in the fuelusagefraction table). MOVES default fuel engine fractions were taken from the MOVESDB20210209 sample vehicle population table.

[3] MOVES default values consistent with the analysis year.

3.3.4 Meteorological Inputs

Meteorological data was used to develop MOVES "county" (barometric pressure) and "zonemonthhour" (temperature and relative humidity) table inputs. These inputs were developed as seasonal hourly temperature and relative humidity, and 24-hour barometric pressure averages, using the hourly data from multiple weather stations within the Houston area (originally developed and applied in the TCEQ's 2011 HGB periodic emissions inventory analysis[19]). Altitude was set to low. Table 19 summarizes

[19] 2011 On-Road Mobile Source Actual Annual and Weekday Emissions Inventories: Houston Area, TTI, August 2012.

the temperature and relative humidity inputs. Barometric pressure input for the period was 29.9544 Inches of Mercury.

Table 19. Meteorological Inputs.

Hour	Temperature (Degrees Fahrenheit)	Relative Humidity (Percent)
1	81.78	77.92
2	81.05	80.26
3	80.42	82.41
4	79.88	83.82
5	79.38	85.06
6	78.92	86.09
7	78.66	86.78
8	79.91	84.25
9	82.99	76.56
10	85.64	67.93
11	88.01	59.29
12	90.11	52.73
13	91.82	48.13
14	92.94	45.45
15	93.60	43.78
16	93.82	43.29
17	93.55	43.99
18	92.67	45.94
19	91.15	49.19
20	88.90	54.47
21	86.34	61.24
22	84.64	66.62
23	83.45	71.05
24	82.54	74.73

Source: Provided by TCEQ. Houston area weather station data averages for the 2011 June through August period developed originally for the 2011 Air Emissions Reporting Requirements (AERR) inventories, TTI, August 2012. Hour "1" is midnight to 1 a.m., etc.

3.3.5 Fuels Inputs

TTI used various data sources to produce the best available Houston summer fuel formulation inputs to MOVES.

3.3.5.1 Assumptions, Sources, and Procedures

Four MOVES fuels input tables must be consistent for the fuel types defined by the scope of the inventory analysis. These are:

- AVFT (SUT fuel type distributions by model year).
- fuelformulation (fuel properties for the fuels supplied in the study area).
- fuelsupply (market shares of each study area fuel formulation).
- fuelusagefraction (fuel types used by flex fuel vehicles).

As defined by the scope of the EIs, only gasoline and diesel fuels were modeled[20]. Therefore the AVFT model year fuel fractions were normalized for only gasoline, diesel, and flex fuel vehicles (i.e., vehicles with the capability to be powered by gasoline or E85 [a blend of 85% ethanol and 15% gasoline, by volume]). Flex fuel vehicle fuel usage was set to 100% gasoline via the fuelusagefraction table. Gasoline and diesel fuel properties and market shares were then specified in the fuelformulation and fuelsupply tables.

The gasoline and diesel fuel property inputs were sourced using local fuel survey data by season and year, supplemented as needed by MOVES defaults and other data (e.g., the U.S. Department of Energy [DOE] annual fuel sales statistics). For future years where no survey data was yet available, the latest available local fuel properties were used, and particular regulated properties were replaced with expected future year values (e.g., regulatory standards or limits, reflected in the MOVES default values for the analysis year and season).

The local data include historical and current, latest available retail outlet seasonal fuel surveys of gasoline and diesel fuel, and annual, estimated state-level fuels sales statistics. The local data also include summaries from which to estimate biodiesel (BD) volumes relative to petroleum diesel sales volumes and gasoline sales estimates by the three grades (regular, mid-grade, premium).

Retail outlet survey data consisted of TCEQ statewide summer gasoline and diesel sampling surveys and EPA summer RFG compliance surveys for Texas RFG areas. The TCEQ survey data applicable to these EIs includes the 2011, 2017, and 2020 summer season statewide surveys. The applicable EPA RFG summer survey data was available from yearly data sets ranging from 2011 through 2020, with separate data for Houston and Dallas areas. TTI used the EPA RFG compliance survey data specific to Houston. For diesel, TTI used TCEQ's statewide diesel surveys data, supplemented with biodiesel volume content estimates based on the DOE Energy Information Administration's (EIA) diesel sales statistics. Biodiesel percentages were updated based on EIA State Energy

[20] MOVES3 requires that inputs are developed for all on-road vehicle fuel types available in MOVES, regardless of the local inventory scope. Inclusion of all on-road fuels in the MRSs was needed to prevent MOVES "missing fuels inputs" run errors.

Data System (SEDS) state-level 2011, 2017, and 2018 (latest available) transportation sector BD consumption estimates for Texas.

The fuel formulation development procedures for RFG involved aggregating and averaging RFG properties for Houston by fuel grade, then weighting them into composite properties using relative sales volumes by grade. For diesel sulfur, consistently stable across the state, the statewide averages were calculated and used for all counties.

TTI prepared inputs for both the pre-1990 and control strategy RFP scenarios. The control strategy fuel formulation inputs were based on the local, retail outlet survey data, and where appropriate, expected future year values, as described above. For the pre-1990 controls scenario, TTI used an appropriate MOVES default gasoline formulation. The pre-1990 controls diesel formulation used was developed by TTI for previous analyses based on National Institute for Petroleum and Energy Research (NIPER)-developed information on pre-regulation diesel sulfur content.

The local, summer season, fuels inputs to MOVES were supplied in the CDB fuelsupply and fuelformulation tables. The fuel supply for each county, year, and month (July for summer) consisted of one local gasoline and one local diesel formulation. Each gasoline and diesel formulation market share in the fuel supply was therefore 1.0.[21]

3.3.5.2 Fuel Formulations

Table 20 and Table 21 summarize the gasoline and diesel fuel property inputs. Note that CetaneIndex and PAHContent fields in the fuelformulation table are not currently enabled for use in MOVES. Fuel formulation inputs for the other fuel types in MOVES (i.e., CNG, E85, and electricity), although not shown, were also input as required.

[21] As stated previously, MOVES3 requires inputs for all on-road vehicle fuel types available in MOVES to be included, regardless of the local inventory scope. The other on-road fuels in MOVES (i.e., CNG, E85, and electricity) were also selected in the MRSs to prevent MOVES "missing fuels inputs" run errors.

Table 20. HGB Counties Reformulated Gasoline MOVES Fuel Formulation Table Inputs.

Fuel Formulation Field[1]	Unit	Pre-1990 Controls Fuel[2]	2011	2017	2018	2020	2021+
fuelFormulationID	-	10001	11724	17724	18724	13724	14724
fuelSubtypeID	-	10	12	12	12	12	12
RVP	psi	7.80	7.06	7.01	7.13	7.15	7.15
sulfurLevel	ppm	429.96	29.52	19.49	20.57	10.01	10.00
ETOHVolume	vol.%	0	9.76	9.67	9.73	9.56	9.56
MTBEVolume	vol.%	0	0	0	0	0	0
ETBEVolume	vol.%	0	0	0	0	0	0
TAMEVolume	vol.%	0	0	0	0	0	0
aromaticContent	vol.%	26.40	14.75	15.62	14.42	16.89	16.89
olefinContent	vol.%	11.90	13.17	10.83	11.98	10.29	10.29
benzeneContent	vol.%	1.64	0.53	0.51	0.51	0.42	0.42
e200	vap.%	46.04	49.21	49.02	49.01	48.26	48.26
e300	vap.%	81.43	84.64	84.54	84.73	84.89	84.89
BioDieseEsterVolume	vol.%	\N	\N	\N	\N	\N	\N
CetaneIndex	-	\N	\N	\N	\N	\N	\N
PAHContent	vol.%	\N	\N	\N	\N	\N	\N
T50	deg. F	207.90	202.18	203.13	203.14	206.18	206.18
T90	deg. F	336.54	328.58	327.89	327.07	326.87	326.87

[1] TTI based the RFG formulations on EPA's Houston RFG compliance (summer) surveys for 2011, 2017, 2018, and 2020 (latest available). RFG properties are actual averages (calculated as composites of averages by fuel grade using sales fractions based on Texas RFG sales volume data from the EIA). The RFG properties for future years are based on the latest survey, except for sulfur, which is set to the expected future level (MOVES3 default, consistent with the Tier 3 standard). Fuel subtype ID 12 is 10% ethanol blended in gasoline (E10).

[2] For the Pre-1990 Controls fuel, the fuel formulation ID 10001 is consistent with TCEQ's most recent HGB RFP emissions analysis (TTI 2019). The 7.8 psi RVP limit formulation (not available in MOVES3) is from MOVES2014b. Fuel subtype ID 10 is non-oxygenated conventional gasoline.

Table 21. HGB Diesel MOVES Fuel Formulation Table Inputs.

Fuel Formulation Field	Unit	Pre-1990 Controls Fuel[1]	2011	2017	2018	2020	2021+
fuelFormulationID	-	32500	30572	31706	31806	30585	30600
fuelSubtypeID[2]	-	20	21	21	21	21	21
RVP	psi	\N	\N	\N	\N	\N	\N
sulfurLevel[3]	ppm	2500.00	5.72	6.37	6.37	5.85	6.00
ETOHVolume	vol.%	\N	\N	\N	\N	\N	\N
MTBEVolume	vol.%	\N	\N	\N	\N	\N	\N
ETBEVolume	vol.%	\N	\N	\N	\N	\N	\N
TAMEVolume	vol.%	\N	\N	\N	\N	\N	\N
aromaticContent	vol.%	\N	\N	\N	\N	\N	\N
olefinContent	vol.%	\N	\N	\N	\N	\N	\N
benzeneContent	vol.%	\N	\N	\N	\N	\N	\N
e200	vap.%	\N	\N	\N	\N	\N	\N
e300	vap.%	\N	\N	\N	\N	\N	\N
BioDieseEsterVolume[4]	vol.%	0	1.89	4.68	4.86	4.86	4.86
CetaneIndex	-	\N	\N	\N	\N	\N	\N
PAHContent	vol.%	\N	\N	\N	\N	\N	\N
T50	deg. F	\N	\N	\N	\N	\N	\N
T90	deg. F	\N	\N	\N	\N	\N	\N

[1] For the Pre-1990 Controls fuel, the fuel formulation ID 32500 is consistent with TCEQ's most recent HGB RFP emissions analysis (TTI 2019). The diesel formulation is based on NIPER U.S. refiner survey summaries which placed average sulfur content for the typical No. 2 diesel, within the post-1979/pre-1993 regulation period, in the 2,500 to 3,000 ppm range.

[2] Fuel subtype ID 20 is conventional diesel. Fuel subtype ID 21 is biodiesel.

[3] Diesel sulfur was based on statewide averages of TCEQ survey data (2018 used nearest survey-based value) with MOVES default for expected future year value.

[4] BD percentages are based on EIA transportation sector BD consumption estimates for Texas, by year, 2018 latest available for future years.

The actual fuelformation and fuelsupply input database tables used were included in the electronic data submittal as described in Appendix B.

3.3.6 I/M Inputs

To model a local I/M program design, it must be defined using MOVES I/M coverage parameters by source type, entered in the MOVES imcoverage table. The appropriate internal MOVES I/M factors for modeling a local I/M program are designated in a model run by the local program input data in the imcoverage table.[22]

[22] In general, MOVES produces a local I/M program effect as an adjustment to the model's internal reference I/M program effect (i.e., represented as the "standard I/M difference" in the pair of MOVES

MOVES adjusts emissions (Hydrocarbons [HC], CO, and NO_X) at the source-type level to incorporate the benefits of the local I/M program design specified using the MOVES I/M coverage table parameters. TTI previously produced a comprehensive set of MOVES imcoverage records for Texas I/M counties to use in place of MOVES defaults.

TTI produced the local I/M coverage input parameters to represent Texas I/M program designs as specified in the Texas I/M SIP and Texas rules. The I/M program requires annual emissions testing of gasoline vehicles within a 2-through-24 year vehicle age coverage window (motorcycles, military tactical vehicles, diesel-powered vehicles, and antique vehicles are excluded). A gas cap integrity test is required on all these vehicles, and depending on the model year, gross vehicle weight (GVW) (threshold of 8,500 pounds GVW separating light-duty and heavy-duty class), and I/M area, current vehicle emissions testing may use On-Board Diagnostics (OBD) tests, the Acceleration Simulation Mode (ASM-2) test, or the Two-Speed Idle (TSI) test.

Table 22 and associated notes describe MOVES imcoverage records developed by TTI for the years available in MOVES applicable to each HGB I/M county. For additional I/M program details, see the current I/M SIP and/or pertinent Texas Administrative Code.[23]

Following is the general approach used to build the Texas imcoverage tables:

- Identified MOVES I/M test standards applicable to Texas I/M counties in consultation with TCEQ (see Table 22, column 4).
- Queried the MOVES database to determine the extent to which MOVES provides I/M effects corresponding to Texas I/M Programs (i.e., test frequency, fuel type, and test types). From the result, listed the SUTs, test standards, pollutant and emissions process combinations with I/M effects in MOVES (i.e., with non-zero MOVES I/M factors and corresponding base emission rates with non-zero standard I/M differences).
- Categorized counties and years in groups under the pertinent MOVES test standards.
- Assigned MOVES I/M Program IDs such that: 1) all MOVES default I/M Program IDs were excluded; and 2) for each year ID, each I/M Program ID represented a

emissions rates [I/M – No I/M], which are specific to vehicle regulatory class categories of which the source types are composed). MOVES contains a large set of "I/M factors" by source type (in the MOVES imfactor table) computed specifically for adjusting the MOVES standard I/M difference to reflect the effects of local I/M program design alternatives.

[23] Revision to the State Implementation Plan Mobile Source Strategies, Inspection and Maintenance State Implementation Plan Revision, TCEQ, adopted February 12, 2014.

unique combination of test standard, test frequency, begin model year, and end model year.

Table 22. MOVES I/M Coverage Inputs for Annual Inspections of Gasoline Vehicles (Harris, Brazoria, Fort Bend, Galveston, Montgomery Counties).

Year ID[1]	Begin Model Year ID[1]	End Model Year ID[1]	Test Standards ID[2]	Source TypeID[3]
2011 2017 2018	1987 1993 1994	1995 1995 1995	23 (A2525/5015 Phase) 41 (Evp Cap)	21 (PC), 31 (PT), 32 (LCT)
2011 2017 2018	1996 1996 1996	2009 2015 2016	51 (Exh OBD) 45 (Evp Cap, OBD)	21 (PC), 31 (PT), 32 (LCT)
2020 2023 2026 2027	1996 1999 2002 2003	2018 2021 2024 2025	51 (Exh OBD) 45 (Evp Cap, OBD)	21 (PC), 31 (PT), 32 (LCT)

[1] begmodelyearID and endmodelyearID define the range of model years covered. Respectively, the 2 through 24-year vehicle age coverage window is first and last model years are calculated as YearID – 24, and YearID – 2. Note that for analysis years (i.e., Year ID) 2018 and earlier, there are two sets of tests, one for 1995 model years and older, and the other for 1996 and newer, whereas starting in analysis year 2020 the older set of tests (and model years) has phased out of the coverage window. [2] Pollutant/processes affected are starts and running exhaust HC, CO, NO_X, and tank vapor venting HC.

[3] PC = Passenger Car; PT= Passenger Truck; and LCT – Light Commercial Truck. Source type compliance factor field input values were updated and provided by TCEQ for this analysis (March 2021), per Section 4.9.6, *MOVES Technical Guidance*, EPA, November 2020. The compliance factors were based on local I/M program statistics by analysis year, and the latest available data (2019) for future years. The HGB I/M county MOVES compliance factors by year, in percent, are:

- ✓ 2011: PC – 88.89; PT – 85.44; LCT – 66.90.
- ✓ 2017: PC – 95.50; PT – 91.79; LCT – 71.87.
- ✓ 2018: PC – 93.20; PT – 89.58; LCT – 70.14.
- ✓ 2019 and later: PC – 95.00; PT – 91.31; LCT – 71.49.

3.4 Checks and Runs

After completing the input data preparation, the CDBs were checked to verify that all 32 tables were in the appropriate CDBs and the tables were populated with data as intended. The MRSs were executed in batches using the MOVES commandline tool. After completion, TTI verified that the MOVES runs were error-free (i.e., checked all run log text files for errors and warnings and compared record counts in each rate table between output databases).

3.5 Post-Processing Runs

Each MOVES output database was post-processed using TTI's MOVES emission rates post-processing utility, updated for MOVES3, for on-road mobile emission rates. Post-processing for each MOVES run was essentially performed in two steps, first to convert MOVES output mass/vehicle parked vehicle evaporative rates to mass/SHP-based emission rates, then, as applicable, to adjust for TxLED effects on diesel vehicle NO_X emission rates. The final emission rates were compiled in lookup tables for input to the emission calculations.

- The mass/SHP off-network evaporative process rates were calculated using data from the CDB, the MOVES default database, and the MOVES rateperprofile and ratepervehicle emission rate output. The utility also copied the mass/mile, mass/start, and mass/hour rates along with the units into emission rate tables. The utility created the look-up tables ttirateperdistance (which also includes the rateperhour rates for off-network idling), ttirateperstart, ttirateperhour (for SHEI and APU hours), and ttiratepershp for each scenario.
- For the RFP control strategy scenario runs, this step applied TxLED adjustments (see factors provided by TCEQ in Table 23) to the diesel vehicle NO_X emissions rates for all counties. (TxLED was not included for the Pre-1990 Controls scenario modeling.) TCEQ produced these average diesel SUT NO_X adjustments using 4.8 percent and 6.2 percent reductions for 2002 and later, and 2001 and earlier model years, respectively.[24] The adjusted rate tables were input to the on-road mobile source emissions calculator utility.[25]

See the utility descriptions in Appendix A for more information.

[24] Reductions as detailed in the EPA Office of Transportation and Air Quality Memorandum, RE: Texas Low Emission Diesel [LED] Fuel Benefits, September 27, 2001.

[25] The TxLED counties list may be found at: http://www.tceq.texas.gov/airquality/mobilesource/txled/txled-affected-counties. For full details on the TCEQ TxLED factor development procedure, see TxLED estimation speadsheets at: ftp://amdaftp.tceq.texas.gov/pub/EI/onroad/txled/.

Table 23. TxLED NO_X Adjustment Factors Summary by Year.

Diesel Fuel Source Use Type	2011	2017	2018	2020	2023	2026	2027
Passenger Car	0.9419	0.9491	0.9503	0.9508	0.9514	0.9517	0.9518
Passenger Truck	0.9430	0.9459	0.9464	0.9477	0.9489	0.9498	0.9501
Light Commercial Truck	0.9430	0.9455	0.9460	0.9473	0.9485	0.9494	0.9496
Other Bus	0.9423	0.9450	0.9456	0.9468	0.9481	0.9494	0.9498
Transit Bus	0.9467	0.9493	0.9496	0.9502	0.9508	0.9512	0.9513
School Bus	0.9433	0.9466	0.9471	0.9481	0.9494	0.9503	0.9506
Refuse Truck	0.9436	0.9463	0.9468	0.9479	0.9495	0.9508	0.9512
Single Unit Short-Haul Truck	0.9486	0.9508	0.9510	0.9514	0.9518	0.9519	0.9520
Single Unit Long-Haul Truck	0.9489	0.9509	0.9510	0.9513	0.9516	0.9518	0.9518
Motor Home	0.9439	0.9447	0.9450	0.9456	0.9467	0.9483	0.9491
Combination Short-Haul Truck	0.9461	0.9500	0.9502	0.9506	0.9513	0.9517	0.9518
Combination Long-Haul Truck	0.9444	0.9482	0.9485	0.9492	0.9507	0.9514	0.9516

The resulting hourly on-road rates were input to the emissions utility to calculate the on-road mobile source inventories for each county RFP inventory scenario. All emissions factor modeling inputs used in the inventories were provided electronically as described in Appendix B.

3.6 Pre-1990 Controls Scenario and Emission Rates for Individual Control Reductions

In a manner consistent with the development of the CS0 and CSC scenario emission rates, TTI produced emission rates for the CS1, CS2, and CS3 incremental control scenarios needed for estimating the individual control measure emissions reductions. Table 24 summarizes the run sequence.

Note that MOVES2014b includes the *Compute Rate-of-Progress "No Clean Air Act Amendments"* feature which assigns 1993 model year emission rates to all post-1993 vehicles. This enabled excluding post-1990 CAAA FMVCP effects in emission rates output, needed for the "Pre-1990 Controls" (CS0) scenario. Since this feature was omitted from MOVES3, TCEQ and TTI agreed on using an alternative method for excluding post-1990 FMVCP effects. This alternative used for the CS0 scenario was to modify the age distributions input to MOVES by setting the 1994 and later model year age fractions to zero and renormalizing the distributions for 1993 and older model years. This alternative provided a conservative result in that "less-deteriorated" or lower mileage 1993 model year vehicles were modeled as not existing in the fleet, shifting toward an overall higher average mileage, or older fleet. Also, since 1993 model year

vehicles completely rotate out of the MOVES fleet starting in 2024, the 2023 analysis year CS0 emission rates were used as surrogates for the 2026 and 2027 analysis year CS0 RFP scenario emission rates.

MOVES post-processor utility runs on the CS0 and CSC scenarios were used in combination with post-processor results for the extra runs needed to produce the five scenarios of emissions estimates. The CS0 and CSC runs and added individual control runs are summarized for the overall emission rates development process, which includes the development of MOVES setups (MRSs, CDBs), and post-processing set-ups. (Utility runs to calculate the emissions estimates are discussed in the next section).

Table 24. Emission Factor Control Scenarios Modeling Sequence.

Scenario Label	Controls Increment	MOVES CDB	MRS MOVES Runs	Post-process Rates/SHP (TxLED)
CS0	Pre-1990 Controls (base)	Pre-1990 controls with age distributions set to 1993 model year fleet	CS0 labels	√ CS0_calc (no TxLED)
CS1	CS0 + post-1990 FMVCP	Same as CS0 except used current age distributions	CS1 labels	√ CS1_calc (no TxLED)
CS2	CS1 + RFG and ULSD	Same as CS1 except current fuels replaced pre-1990 fuels	CS2 labels	√ CS2_calc (no TxLED)
CS3	CS2 + I/M	Same as CS2 except I/M coverage records added (except non-I/M counties)	CS3 labels	√ CS3_calc (no TxLED)
CSC	CS3 + TxLED	Same as CS3 CDB	CS3 labels	√ CSC_adj (TxLED-adjusted)

As shown in Table 24, the CS1, CS2, and CS3 control scenarios required the full process stream of set-ups and runs, with no TxLED adjustment applied. The CS3 scenario after adjustment for TxLED is the existing CSC full control strategy scenario (i.e., CS3 is the pre-TxLED-adjusted CSC). This series of additional emissions factor modeling set-ups and runs was executed for 2017, 2018, 2020, 2023, 2026, and 2027 analysis years.

The emissions factors for the CS1, CS2, and CS3 incremental control scenarios for each year and county were input with appropriate activity inputs to the emissions calculation utility to produce the emissions estimates that, together with the existing CS0 and CSC scenario emissions, were used to quantify the individual control measure emissions reductions, discussed in a later section.

The MOVES emissions factor set-ups used (MRS files and CDBs) were provided as a part of the electronic data submittal (see Appendix B).

4.0 EMISSIONS CALCULATIONS

TTI calculated hourly on-road mobile emissions by county for each inventory scenario using the TTI EI utilities. The TDM link-based inventory methodology calculated on- and off-network emissions by multiplying traffic activity by emission rates. The VMT-based emissions calculations used the TDM link-based VMT and congested speeds to estimate link-level emissions. The off-network emissions calculations used off-network activity (ONI hours, SHP, starts, SHEI, and APU hours) to estimate emissions at the county level.

The TTI EI utilities produced emissions outputs aggregated by county, hour, road functional class, road area type, vehicle type, pollutant, pollutant process, and link for on-network emissions; and county, hour, road functional class, vehicle type, pollutant, and pollutant process for off-network emissions.

These outputs were then post-processed to produce electronic files in formats suitable for submission to the TCEQ sponsor, including a standard tab-delimited EI summary, various tab-delimited EI summary aggregations, a tab-delimited source classification code (SCC)-coded EI summary, and an XML-formatted EI summary of the RFP control strategy EIs.

4.1 INPUTS

County-level hourly link (on-network) and off-network emissions for each inventory scenario were calculated using TTI's EI utilities and the following inputs:

- *County of inventory* – from study area counties list, including county FIPS, link data county code, TxDOT district ID, county group FIPS (where applicable), TxLED flag, county type flag (MSA or non-MSA).
- *Vehicle type VMT mix* – time period TxDOT district-level VMT mix by MOVES roadway type.
- *Time period designation* – the four VMT mix time periods to hour-of-day associations.
- *Roadway-based activity* – link (and intrazonal link)-specific, hourly, directional, operational VMT and speed estimates as developed by the EI utility to include A node, B node, county number, TDM road type (functional class) code, link length, congested (operational) speed, VMT, and TDM area type code.
- *TDM road type designations* – TDM road type and area type codes to MOVES road type codes (and to VMT mix road type, and rates road type codes) (see Table 25).

- *Off-network activity* – county, hourly ONI hours, SHP, starts, SHEI, and APU hours by vehicle type.
- *Pollutant/process/units list* – for emissions.
- *Roadway-based emissions factors* – MOVES-based, county level by pollutant, process, hour, average speed, MOVES road type, SUT, and fuel type.
- *Off-network (parked vehicle) emissions factors* – MOVES-based, county level by pollutant, process, hour, SUT, and fuel type.
- *SCCs* – mapping for MOVES source type, fuel type, road type, and process codes to output SCCs.
- *MOVES pollutant codes to National Emissions Inventory (NEI) pollutant codes* – for SCC output.

4.1.1 VMT-Based On-network Emissions

The VMT-based emissions were calculated for each hour using the time-period TxDOT-level SUT/fuel type VMT mix, the link VMT and speeds estimates, the MOVES-based "on-network" emissions factors, and the link road type/area type-to-MOVES road type designations. For each link, the link was assigned a MOVES road type based on the link's road type and area type (see Table 25). The link VMT was distributed to each vehicle type using the VMT mix from the appropriate time period based on the link's MOVES road type. The time period VMT mixes were applied by the hour as follows: morning peak – 6 a.m. to 9 a.m.; mid-day – 9 a.m. to 3 p.m.; evening peak – 3 p.m. to 7 p.m.; and overnight – 7 p.m. to 6 a.m.

The emissions factors by hour for each vehicle type were selected based on the designated hour of the MOVES road type and the link speed. For link speeds falling between MOVES speed bin average speeds, emissions factors were interpolated from bounding speeds. For link speeds falling outside of the MOVES speed range (less than 2.5 mph and greater than 75 mph), the emissions factors for the associated bounding speeds were used. The mass/mi rates were multiplied by the link vehicle type VMT producing the link-level emissions estimates. This was performed for each hour of the day.

Table 25. H-GAC TDM Road Type/Area Type to MOVES Road Type Designations.

TDM Road Type (Code - Name)[1]	TDM Area Type (Code - Name)[1]	MOVES Road Type (Code - Name)[1, 2]
3 - Toll Roads	5 – Rural	2 – Rural Restricted Access
10 - Rural Interstate	5 – Rural	2 – Rural Restricted Access
11 - Rural Other Freeway	5 – Rural	2 – Rural Restricted Access
4 - Ramps (Fwy/Toll/Frnt)	5 – Rural	3 – Rural Unrestricted Access
8 - Local (Centroid Connector)	5 – Rural	3 – Rural Unrestricted Access
12 - Rural Principal Arterial	5 – Rural	3 – Rural Unrestricted Access
13 - Rural Other Arterial	5 – Rural	3 – Rural Unrestricted Access
14 - Rural Major Collector	5 – Rural	3 – Rural Unrestricted Access
15 - Rural Collector	5 – Rural	3 – Rural Unrestricted Access
1 - Urban Interstate	1 – CBD; 2 – Urban; 3 – Urban Fringe	4 – Urban Restricted Access
2 - Urban Other Freeway	2 – Urban; 3 – Urban Fringe	4 – Urban Restricted Access
3 - Toll Roads	1 – CBD; 2 – Urban; 3 – Urban Fringe; 4 – Suburban	4 – Urban Restricted Access
10 - Rural Interstate	2 – Urban; 3 – Urban Fringe; 4 – Suburban	4 – Urban Restricted Access
11 - Rural Other Freeway	3 - Urban Fringe; 4 – Suburban	4 – Urban Restricted Access
4 - Ramps (Fwy/Toll/Frnt)	1 – CBD; 2 – Urban; 3 – Urban Fringe; 4 – Suburban	5 – Urban Unrestricted Access
5 - Urban Principal Arterial	1 – CBD; 2 – Urban; 3 – Urban Fringe	5 – Urban Unrestricted Access
6 - Urban Other Arterial	1 – CBD; 2 – Urban; 3 – Urban Fringe; 4 – Suburban	5 – Urban Unrestricted Access
7 - Urban Collector	1 – CBD; 2 – Urban; 3 – Urban Fringe	5 – Urban Unrestricted Access
8 - Local (Centroid Connector)	1 – CBD; 2 – Urban; 3 – Urban Fringe; 4 – Suburban	5 – Urban Unrestricted Access
12 - Rural Principal Arterial	3 – Urban Fringe; 4 – Suburban	5 – Urban Unrestricted Access
13 - Rural Other Arterial	3 – Urban Fringe; 4 – Suburban	5 – Urban Unrestricted Access
14 - Rural Major Collector	3 – Urban Fringe; 4 – Suburban	5 – Urban Unrestricted Access
15 - Rural Collector	3 – Urban Fringe; 4 – Suburban	5 – Urban Unrestricted Access
40 - Local (Intrazonal)	40 – Local (Intrazonal)	5 – Urban Unrestricted Access

[1] The TDM road type and area type code combinations are also correlated to VMT mix road type codes and emission rate road type codes, which, for this analysis, are identical to the MOVES road type codes.

[2] The four period, time-of-day VMT mix to hour-of-day designations are: AM peak – three hours of 6 a.m. to 9 a.m.; mid-day – six hours of 9 a.m. to 3 p.m.; PM peak – four hours of 3 p.m. to 7 p.m.; and overnight – 11 hours of 7 p.m. to 6 a.m.

4.1.2 Off-Network Emissions

The off-network emissions were calculated at the county-level by multiplying the hourly MOVES-based SUT/fuel type off-network emissions factors by the appropriate county-level hourly SUT/fuel type off-network activity, which was determined by the pollutant process (and MOVES road type "1" for ONI) and associated emission rates table. The off-

network emissions calculations used off-network activity (ONI hours, SHP, starts, SHEI, and APU hours) to estimate emissions at the county level.

4.2 Emissions Output

The TTI EI utilities hourly link-based emissions output data sets included three output files per run:

- A log file summarizing run times and min/max output file sizes, etc.
- A tab-delimited summary output file consisting of one header section followed by hourly and 24-hour totals data blocks of on-road activity and emissions (in units of pounds). Hourly and 24-hour total summaries are by road type and vehicle type of VMT, VHT, speed (VMT/VHT), pollutant totals, and pollutant process totals (with the "off-network" category listed as the last road type preceding the TOTALS row in each data block), and with starts, SHP, SHEI, and APU activity rows last in the activity data block for each time period.
- A tab-delimited summary SCC output file that contains the 24-hour totals of VMT and emissions (in units of pounds) using inventory data aggregations, SCCs, and pollutant codes consistent with the EPA's 2017 NEI.

The pollutants reported are listed in Table 26.

Table 26. Pollutants.

Pollutant ID	Pollutant Name
2	Carbon Monoxide (CO)
3	Oxides of Nitrogen (NO_X)
30	Ammonia (NH_3)
31	Sulfur Dioxide (SO_2)
87	Volatile Organic Compounds (VOC)
90	Atmospheric CO_2
100	Primary Exhaust PM_{10} – Total
106	Primary PM_{10} –Brakewear Particulate
107	Primary PM_{10} – Tirewear Particulate
110	Primary Exhaust $PM_{2.5}$ – Total
116	Primary $PM_{2.5}$ – Brakewear Particulate
117	Primary $PM_{2.5}$ – Tirewear Particulate

Additional post-processors produced inventory extracts from the standard tab-delimited output in seven different aggregations. All these files were provided as a part of the data package as described in Appendix B.

4.2.1 Summary of Results

Table 27, Table 28, and Table 29 summarize the resulting pollutant totals inventory estimates and individual control strategy reduction estimates for the HGB eight-county area. The PM emissions estimates in Table 27 are aggregates of exhaust processes, brakewear, and tirewear.

Table 27. HGB Eight-County Area Summer Weekday On-Road Mobile Source RFP Emissions Inventories (Tons/Day).

Base Year[1]

Year	VMT	Speed	VOC	CO	NO_X	SO_2	NH_3	CO_2	$PM_{2.5}$	PM_{10}
2011	145,516,066	30.32	84.12	1,244.41	179.34	1.52	5.86	89,915.60	6.44	14.82

Pre-1990 Controls[2]

Year	VMT	Speed	VOC	CO	NO_X	SO_2	NH_3	CO_2	$PM_{2.5}$	PM_{10}
2017	173,533,549	34.63	619.10	8,950.79	1,047.74	48.76	19.82	98,733.37	20.97	30.57
2018	178,967,556	37.72	609.63	8,785.97	1,081.45	50.77	20.59	100,247.06	21.44	30.38
2020	187,942,688	37.56	641.98	9,232.64	1,138.21	53.52	21.63	105,494.76	22.64	32.10
2023	199,141,361	37.49	680.43	9,772.96	1,205.41	56.90	22.96	111,792.68	24.01	34.05
2026	208,706,310	37.19	716.68	10,288.79	1,264.15	59.69	24.05	117,411.78	25.22	35.87
2027	211,938,550	37.07	729.07	10,465.46	1,284.15	60.65	24.42	119,335.62	25.65	36.51

Control Strategy[3]

Year	VMT	Speed	VOC	CO	NO_X	SO_2	NH_3	CO_2	$PM_{2.5}$	PM_{10}
2017	173,533,549	34.63	48.53	913.01	99.11	1.08	5.01	96,167.69	3.95	11.85
2018	178,967,556	37.72	45.03	861.23	92.17	1.12	4.99	95,767.64	3.60	10.77
2020	187,942,688	37.56	39.14	812.98	74.87	0.58	4.91	96,275.67	3.01	10.53
2023	199,141,361	37.49	33.85	724.71	59.45	0.57	4.97	94,947.26	2.62	10.58
2026	208,706,310	37.19	28.98	643.75	49.08	0.55	5.06	92,682.63	2.43	10.87
2027	211,938,550	37.07	27.98	621.01	47.31	0.55	5.11	92,046.58	2.40	11.01

[1] Base year inventory: 2011 activity inputs and 2011 current control strategy emission rates.

[2] Pre-1990 controls inventories: analysis year activity inputs and analysis year pre-1990 controls emission rates. Rates are for analysis year fleet but exclude post-1990 CAAA controls – no I/M program, no post-1990 FMVCP effects, no RFG (instead uses pre-1992 conventional gasoline with 1992 summer RVP limit promulgated prior to the enactment of the 1990 CAAA), and no TxLED.

[3] Control strategy inventories: analysis year activity inputs and analysis year control strategy emission rates. Rates include effects of control strategies for analysis year (i.e., both pre- and post-1990 FMVCP, Tier 3 RFG and Ultra Low Sulfur Diesel, I/M [depending on county], and TxLED).

Table 28. HGB Eight-County Area Summer Weekday RFP Control Scenario Inventories and VOC Reductions (Tons) by Analysis Year.

VOC Emissions Analysis	2011	2017	2018	2020	2023	2026	2027
Pre-90 Control Inventory	-	619.10	609.63	641.98	680.43	716.68	729.07
Control Strategy Inventory	84.12	48.53	45.03	39.14	33.85	28.98	27.98
Total Reductions	-	570.56	564.60	602.84	646.58	687.70	701.09
FMVCP Reductions	-	554.73	550.59	589.50	635.40	677.98	691.79
Tier 3 RFG and ULSD[1] Reductions	-	10.81	9.34	9.01	7.04	5.65	5.22
I/M Reductions	-	5.02	4.66	4.34	4.13	4.08	4.08
TxLED Reductions	-	-	-	-	-	-	-

[1] RFG with Tier 3 sulfur and pre-1990 diesel replaced with Ultra Low Sulfur Diesel.
Notes: Columns may not total due to rounding, and "-" = "not applicable".

Table 29. HGB Eight-County Area Summer Weekday RFP Control Scenario Inventories and NO_X Reductions (Tons) by Analysis Year.

NO_X Emissions Analysis	2011	2017	2018	2020	2023	2026	2027
Pre-90 Control Inventory	-	1,047.74	1,081.45	1,138.21	1,205.41	1,264.15	1,284.15
Control Strategy Inventory	179.34	99.11	92.17	74.87	59.45	49.08	47.31
Total Reductions	-	948.63	989.28	1,063.33	1,145.96	1,215.07	1,236.83
FMVCP Reductions	-	907.99	953.12	1,030.35	1,122.54	1,197.68	1,220.91
Tier 3 RFG and ULSD[1] Reductions	-	32.30	28.80	27.55	19.48	14.18	12.86
I/M Reductions	-	5.37	4.52	2.90	1.84	1.36	1.25
TxLED Reductions	-	2.97	2.84	2.53	2.10	1.85	1.81

[1] RFG with Tier 3 sulfur and pre-1990 diesel replaced with Ultra Low Sulfur Diesel.
Notes: Columns may not total due to rounding, and "-" = "not applicable".

4.3 XML-Formatted 24-Hour Summaries for TexAER

TTI further post-processed the 24-hour summer weekday control strategy scenario SCC-labeled inventory output for each analysis year, using the TTI's XML formatting utility, into the NEI Emissions Inventory System (EIS) Consolidated Emissions Reporting Schema (CERS) XML format for inclusion in TCEQ's TexAER database.

The tab-delimited SCC-based inventory data files output by the utility were produced for direct input to the XML utility using inventory data aggregation and coding (SCCs and pollutant codes) consistent with EPA's latest (2020) NEI, as required for

compatibility with TexAER. The current NEI SCC codes are aggregations of the more detailed MOVES SCC codes, providing the total emissions for each valid NEI pollutant by source type and fuel type (e.g., for on-road, by pollutant, the total of all roadway-based and off-network processes, excluding refueling).

The on-road EI XML summaries include VOC, CO, NO_X, SO_2, NH_3, CO_2, $PM_{2.5}$, and PM_{10} (PMs are aggregate of exhaust, tirewear, and brakewear). Each run produced an XML file and one tab-delimited SCC-labeled inventory summary per county included in the run. Further details may be found in Appendix B.

5.0 QUALITY ASSURANCE

Analyses and results were subjected to appropriate internal review and quality assurance (QA)/quality control (QC) procedures, including independent verification and reasonableness checks. All work was completed consistent with applicable elements of American Society for Quality, American National Standard (ASQ/ANSI): E4:2014: *Quality Management Systems for Environmental Information and Technology Programs – Requirements with Guidance for Use,* February 2014, and the TCEQ Quality Management Plan.

The Quality Assurance Project Plans (QAPP) category and project type most closely matching the intended use of this analysis are QAPP Category II (for important, highly visible Agency projects involving areas such as supporting the development of environmental regulations or standards) and Modeling for NAAQS Compliance. Internal review and quality control measures consistent with the QA category and project type-specific requirements provided in Guidance for Quality Assurance Project Plans for Modeling, EPA QA/G-5M,[26] along with appropriate audits or assessments of data and reporting of findings, were employed. These include but are not limited to the elements outlined, per EPA Requirements for Quality Assurance Project Plans (EPA QA/R-5),[27] in the following description.

5.1 PROJECT MANAGEMENT

The definition and background of the problem addressed by this project, the project/task description, and project documents and records produced are as described previously in the Purpose and Background sections of the Grant Activity Description (GAD). No special training or certifications were required. The TTI project manager assured that the appropriate project personnel had and used the most current, approved version of the QAPP.

The objective was to produce the emissions inventory product of the quality suited to its purpose as specified (i.e., inventories needed to support RFP analyses), in accordance with the appropriate guidance and methods documents as referenced, and in consultation with the TCEQ project manager.

Basic criteria were used to assure the acceptable quality of the product, including the following.

[26] PDF available at: https://www.epa.gov/sites/production/files/2015-06/documents/g5m-final.pdf.
[27] PDF available at: https://www.epa.gov/sites/production/files/2016-06/documents/r5-final_0.pdf.

- The product met the purpose of the emissions analysis.
- The full extent of the modeling domain was included.
- Agreed methods, models, tools, and data were used.
- The output data sets were produced in required formats.
- Any deficiencies found (as discussed in Section 5.5) were corrected.
- Aggregate results were comparable with available, similarly produced emissions estimates.

5.2 Measurement and Data Acquisition

Note that no sampling of data was involved in the EI development; thus, only existing data (non-direct measurements) were used for this project.

The data needed for project implementation was for the development of emission rate model inputs and adjustment factors and the development of the activity inputs for external emissions calculations. Existing data acquired from various organizations (e.g., TxDOT, MPOs, TCEQ, EPA) was reviewed by TTI for suitability, and in most cases was previously QA'd by the providing agency. These data sets may include HPMS data (from TxDOT's Roadway Inventory Functional Classification Record [RIFCREC] report); regional travel demand model data; speed model data; vehicle registration data; ATR data; vehicle classification count data; meteorological data; fuels data; MOVES emissions model data; extended idling activity data; and vehicle I/M program design data.

Any significant problems found during the review, verification, and/or validation (see QA criteria and methods discussed in Section 5.5) were corrected, and the QA procedure was repeated until satisfied. No significant problems were found.

5.3 Data Management

The project team used the same electronic project folder structure on each individual workstation. As various scripts, inputs, and outputs were developed in the process, data were shared within the team for crosschecking. To perform the MOVES model runs, a computer cluster (multiple computers) configuration or individual workstation configuration was used. After input data were QA'd, data sets were backed up and stored in compressed files.

After the final product was completed, all the project data was archived onto a local or an external drive. A complete archive of the project data is kept by TTI (the computer models and EI development utilities used in the process included). The electronic data

submittal package (containing the project deliverables as listed in Appendix B) was produced along with data description (and copied to a shared folder and/or external hard drive) and delivered to TCEQ.

5.4 Assessment and Oversight

The following assessments were performed.

- Verified that the overall scope was met (i.e., consistent with the intended purpose, for specified temporal resolution and geographic coverage, for specified sources, pollutants, and emissions processes).
- Checked that input data was prepared according to the plan.
- Checked that correct output data was produced. Records were kept of the checks performed.

In the case of any inconsistency or deficiency found, the issue was directly communicated to responsible staff for correction (or outside agency staff involved, if any). After any correction, QA checks were repeated to assure the additional work resulted in the intended result and were noted in the QA record.

Any major problems were reported to the project manager and communicated to the project team as needed, as well as when various data elements passed QA checks and were ready next steps. The project manager ensured all of the QA checks performed were compiled and maintained in the project archives.

In addition, technical systems audits were performed. Audits of data quality at the requisite 25 percent level were performed for any data produced as part of this study. QA findings were reported in both the draft and the final reports.

5.5 Data Validation and Usability

Erroneous or improper inputs at any point during the EI development process may produce inaccurate emissions estimates. The TTI project team performed QA checks at each step of the analysis to ensure data quality.

The criteria for passing quality checks are summarized in the following. These QA guidelines were used to ensure the development of EIs that were as accurate as possible and met the requirements of TCEQ's intended use.

As previously stated, TTI verified the overall scope of the emissions analysis to include:

- Purpose (i.e., needed for RFP SIP analysis).
- Modeling domain (e.g., analysis years, geographic coverage, seasonal periods, days, sources, pollutants).
- Methods, models, and data (e.g., default versus local input data sources).
- Procedures, tools, and required emissions output data sets.

TTI performed checks on input data, model execution, and output, as follows:

- Input data preparation:
  - The basis of input data sets as planned (e.g., actual, historical, latest available, validated model); aggregation levels.
  - Depending on the procedure and input data set, verification of calculations.
  - Use of correct data dimensions, fields, coding, labeling, formats; distributions sum to 1.0 where appropriate.
  - Reasonability checks: (discussed in the next section).
  - External data sources quality assurance verification.
- Model or utility execution:
  - Correct number of utility or model run input files per application.
  - Utility control or model run specifications verification (e.g., per the applicable user guide, correct inputs, output options).
- Output:
  - Correct output files by type and quantity.
  - Expected output file sizes.
  - Warnings and errors (e.g., checks of any written to output run logs).
  - Required data, proper coding/labeling, formats.
  - Assessment of any unusual results.

TTI performed further checks for consistency, completeness, and reasonability of data output from model or utility applications.

- Any activity, emission rate, or emissions adjustments were performed as intended.
- Noted whether directional differences were as expected (e.g., between scenarios with temporal or geographic variation).
- Checked for consistency (e.g., input data control totals versus output summaries, utility raw results versus post-processed results).
- Compared results to results from previous similar analyses where available.

Any additional data products required for the emissions analysis were subjected to the appropriate QA checks previously listed. Any issues found needing resolution were corrected, and appropriate QA checks were performed until satisfied, ensuring the project results met TCEQ requirements, i.e., as outlined in the GAD and QAPP.

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APPENDIX A:
EMISSIONS ESTIMATION UTILITIES FOR MOVES-BASED EMISSIONS INVENTORIES (ELECTRONIC ONLY)

This appendix is available separately in an electronic format (e.g., .docx, .xlsx, .pdf, .txt, .zip, or other format) and can be provided upon request.

APPENDIX B:
HGB RFP ON-ROAD INVENTORIES ELECTRONIC DATA SUBMITTAL (ELECTRONIC ONLY)

This appendix is available separately in an electronic format (e.g., .docx, .xlsx, .pdf, .txt, .zip, or other format) and can be provided upon request.

APPENDIX C:
TXDOT DISTRICT VMT MIX BY DAY OF WEEK

VMT Mix Year/Analysis Year Correlations

VMT Mix Year	Analysis Years
2000	1998 through 2002
2005	2003 through 2007
2010	2008 through 2012
2015	2013 through 2017
2020	2018 through 2022
2025	2023 through 2027
2030	2028 through 2032

TxDOT District/HGB Counties

TxDOT District	District Code	HGB County	County FIPS
Beaumont	D05	Chambers	48071
Beaumont	D05	Liberty	48291
Houston	D13	Brazoria	48039
Houston	D13	Fort Bend	48157
Houston	D13	Galveston	48167
Houston	D13	Harris	48201
Houston	D13	Montgomery	48339
Houston	D13	Waller	48473

VMT Mix Year/Analysis Year Correlations

Roadway Type	Roadway Code
Rural Restricted	RT2
Rural Unrestricted	RT3
Urban Restricted	RT4
Urban Unrestricted	RT5

2010 Weekday VMT Mix – Beaumont TxDOT District (2011 Activity Scenario)

SUT/FT	AM Peak RT2	AM Peak RT3	AM Peak RT4	AM Peak RT5	Mid-Day RT2	Mid-Day RT3	Mid-Day RT4	Mid-Day RT5	PM Peak RT2	PM Peak RT3	PM Peak RT4	PM Peak RT5	Over-night RT2	Over-night RT3	Over-night RT4	Over-night RT5
11_G	0.00054	0.00052	0.00055	0.00067	0.00049	0.00051	0.00053	0.00064	0.00049	0.00057	0.00056	0.00069	0.00041	0.00054	0.00049	0.00069
21_G	0.53243	0.52124	0.55050	0.66948	0.48581	0.50751	0.53206	0.63531	0.48467	0.56704	0.55371	0.68693	0.40848	0.54097	0.48659	0.68481
21_D	0.00214	0.00209	0.00221	0.00269	0.00195	0.00204	0.00214	0.00255	0.00195	0.00228	0.00222	0.00276	0.00164	0.00217	0.00195	0.00275
31_G	0.22657	0.26272	0.20155	0.21983	0.22483	0.26388	0.19155	0.23704	0.22946	0.26963	0.19385	0.22499	0.20153	0.24835	0.15558	0.21579
31_D	0.00322	0.00373	0.00286	0.00312	0.00319	0.00375	0.00272	0.00337	0.00326	0.00383	0.00275	0.00319	0.00286	0.00353	0.00221	0.00306
32_G	0.05646	0.06547	0.05022	0.05478	0.05602	0.06575	0.04773	0.05907	0.05718	0.06719	0.04831	0.05606	0.05022	0.06189	0.03877	0.05377
32_D	0.00316	0.00366	0.00281	0.00307	0.00314	0.00368	0.00267	0.00331	0.00320	0.00376	0.00270	0.00314	0.00281	0.00346	0.00217	0.00301
41_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
41_D	0.00095	0.00353	0.00136	0.00245	0.00055	0.00192	0.00142	0.00195	0.00071	0.00066	0.00117	0.00165	0.00094	0.00064	0.00169	0.00142
42_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
42_D	0.00039	0.00146	0.00056	0.00101	0.00023	0.00079	0.00058	0.00080	0.00029	0.00027	0.00048	0.00068	0.00039	0.00026	0.00069	0.00059
43_G	0.00001	0.00005	0.00002	0.00003	0.00001	0.00002	0.00002	0.00003	0.00001	0.00001	0.00002	0.00002	0.00001	0.00001	0.00002	0.00002
43_D	0.00122	0.00454	0.00175	0.00315	0.00071	0.00247	0.00182	0.00251	0.00091	0.00084	0.00151	0.00212	0.00120	0.00083	0.00217	0.00183
51_G	0.00048	0.00075	0.00049	0.00041	0.00052	0.00080	0.00058	0.00056	0.00036	0.00053	0.00041	0.00020	0.00057	0.00055	0.00046	0.00030
51_D	0.00086	0.00133	0.00087	0.00072	0.00092	0.00142	0.00104	0.00100	0.00064	0.00094	0.00073	0.00036	0.00101	0.00099	0.00082	0.00054
52_G	0.01056	0.01632	0.01064	0.00887	0.01132	0.01739	0.01272	0.01225	0.00786	0.01156	0.00898	0.00435	0.01241	0.01209	0.01009	0.00666
52_D	0.01886	0.02915	0.01899	0.01584	0.02022	0.03105	0.02271	0.02187	0.01404	0.02064	0.01604	0.00777	0.02216	0.02159	0.01801	0.01190
53_G	0.00037	0.00057	0.00037	0.00031	0.00040	0.00061	0.00045	0.00043	0.00028	0.00041	0.00032	0.00015	0.00044	0.00043	0.00036	0.00023
53_D	0.00066	0.00103	0.00067	0.00056	0.00071	0.00109	0.00080	0.00077	0.00049	0.00073	0.00056	0.00027	0.00078	0.00076	0.00063	0.00042
54_G	0.00037	0.00056	0.00037	0.00031	0.00039	0.00060	0.00044	0.00042	0.00027	0.00040	0.00031	0.00015	0.00043	0.00042	0.00035	0.00023
54_D	0.00065	0.00101	0.00066	0.00055	0.00070	0.00107	0.00079	0.00076	0.00049	0.00071	0.00055	0.00027	0.00077	0.00075	0.00062	0.00041
61_G	0.00296	0.00169	0.00322	0.00026	0.00397	0.00198	0.00374	0.00032	0.00408	0.00101	0.00348	0.00009	0.00614	0.00211	0.00583	0.00024
61_D	0.02955	0.01693	0.03217	0.00256	0.03962	0.01974	0.03738	0.00324	0.04079	0.01013	0.03476	0.00090	0.06136	0.02104	0.05827	0.00244
62_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
62_D	0.10760	0.06164	0.11715	0.00933	0.14430	0.07191	0.13612	0.01181	0.14856	0.03688	0.12657	0.00326	0.22345	0.07663	0.21222	0.00888

2010 Weekday VMT Mix – Houston TxDOT District (2011 Activity Scenario)

SUT/FT	AM Peak RT2	AM Peak RT3	AM Peak RT4	AM Peak RT5	Mid-Day RT2	Mid-Day RT3	Mid-Day RT4	Mid-Day RT5	PM Peak RT2	PM Peak RT3	PM Peak RT4	PM Peak RT5	Over-night RT2	Over-night RT3	Over-night RT4	Over-night RT5
11_G	0.00072	0.00065	0.00071	0.00073	0.00053	0.00058	0.00066	0.00068	0.00069	0.00066	0.00072	0.00074	0.00065	0.00068	0.00071	0.00074
21_G	0.71351	0.64458	0.70404	0.72626	0.52937	0.57402	0.65990	0.68121	0.68227	0.65913	0.71222	0.74004	0.64239	0.67728	0.70899	0.73657
21_D	0.00287	0.00259	0.00283	0.00292	0.00213	0.00231	0.00265	0.00274	0.00274	0.00265	0.00286	0.00297	0.00258	0.00272	0.00285	0.00296
31_G	0.18248	0.20802	0.18296	0.17773	0.15530	0.22683	0.19178	0.19089	0.16609	0.22166	0.18456	0.17487	0.19602	0.19104	0.16234	0.16268
31_D	0.00259	0.00295	0.00260	0.00252	0.00221	0.00322	0.00272	0.00271	0.00236	0.00315	0.00262	0.00248	0.00278	0.00271	0.00231	0.00231
32_G	0.04547	0.05183	0.04559	0.04429	0.03870	0.05652	0.04779	0.04757	0.04139	0.05523	0.04599	0.04358	0.04885	0.04760	0.04045	0.04054
32_D	0.00254	0.00290	0.00255	0.00248	0.00217	0.00316	0.00267	0.00266	0.00232	0.00309	0.00257	0.00244	0.00273	0.00266	0.00226	0.00227
41_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
41_D	0.00185	0.00144	0.00141	0.00143	0.00056	0.00094	0.00089	0.00098	0.00008	0.00043	0.00102	0.00051	0.00185	0.00053	0.00100	0.00047
42_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
42_D	0.00076	0.00059	0.00058	0.00059	0.00023	0.00039	0.00037	0.00040	0.00003	0.00018	0.00042	0.00021	0.00076	0.00022	0.00041	0.00020
43_G	0.00002	0.00002	0.00002	0.00002	0.00001	0.00001	0.00001	0.00001	0.00000	0.00001	0.00001	0.00001	0.00002	0.00001	0.00001	0.00001
43_D	0.00238	0.00185	0.00181	0.00184	0.00072	0.00121	0.00114	0.00126	0.00010	0.00056	0.00131	0.00066	0.00238	0.00069	0.00128	0.00061
51_G	0.00037	0.00077	0.00056	0.00045	0.00107	0.00111	0.00085	0.00074	0.00044	0.00055	0.00041	0.00036	0.00053	0.00058	0.00042	0.00035
51_D	0.00036	0.00073	0.00053	0.00043	0.00101	0.00105	0.00081	0.00070	0.00042	0.00052	0.00039	0.00034	0.00050	0.00055	0.00040	0.00033
52_G	0.00739	0.01515	0.01095	0.00896	0.02103	0.02181	0.01681	0.01462	0.00877	0.01087	0.00813	0.00703	0.01040	0.01136	0.00826	0.00687
52_D	0.00702	0.01438	0.01040	0.00851	0.01996	0.02070	0.01596	0.01388	0.00833	0.01032	0.00772	0.00667	0.00987	0.01079	0.00784	0.00653
53_G	0.00109	0.00224	0.00162	0.00133	0.00311	0.00323	0.00249	0.00217	0.00130	0.00161	0.00120	0.00104	0.00154	0.00168	0.00122	0.00102
53_D	0.00104	0.00213	0.00154	0.00126	0.00296	0.00307	0.00236	0.00206	0.00123	0.00153	0.00114	0.00099	0.00146	0.00160	0.00116	0.00097
54_G	0.00028	0.00058	0.00042	0.00034	0.00081	0.00084	0.00064	0.00056	0.00034	0.00042	0.00031	0.00027	0.00040	0.00044	0.00032	0.00026
54_D	0.00027	0.00055	0.00040	0.00033	0.00077	0.00079	0.00061	0.00053	0.00032	0.00040	0.00030	0.00026	0.00038	0.00041	0.00030	0.00025
61_G	0.00050	0.00085	0.00053	0.00033	0.00403	0.00145	0.00091	0.00062	0.00150	0.00050	0.00048	0.00027	0.00137	0.00086	0.00107	0.00063
61_D	0.00576	0.00983	0.00608	0.00375	0.04639	0.01669	0.01043	0.00718	0.01724	0.00577	0.00557	0.00310	0.01577	0.00992	0.01227	0.00727
62_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
62_D	0.02072	0.03536	0.02189	0.01351	0.16693	0.06007	0.03753	0.02583	0.06203	0.02077	0.02003	0.01117	0.05676	0.03568	0.04414	0.02617

2015 Weekday VMT Mix – Beaumont TxDOT District (2017 Activity Scenario)

SUT/FT	AM Peak RT2	AM Peak RT3	AM Peak RT4	AM Peak RT5	Mid-Day RT2	Mid-Day RT3	Mid-Day RT4	Mid-Day RT5	PM Peak RT2	PM Peak RT3	PM Peak RT4	PM Peak RT5	Over-night RT2	Over-night RT3	Over-night RT4	Over-night RT5
11_G	0.00054	0.00052	0.00055	0.00067	0.00049	0.00051	0.00053	0.00064	0.00049	0.00057	0.00056	0.00069	0.00041	0.00054	0.00049	0.00069
21_G	0.53082	0.51967	0.54885	0.66747	0.48435	0.50598	0.53046	0.63339	0.48321	0.56533	0.55205	0.68486	0.40725	0.53934	0.48513	0.68275
21_D	0.00374	0.00366	0.00387	0.00471	0.00341	0.00357	0.00374	0.00447	0.00341	0.00399	0.00389	0.00483	0.00287	0.00380	0.00342	0.00481
31_G	0.22719	0.26345	0.20210	0.22044	0.22545	0.26461	0.19207	0.23769	0.23009	0.27037	0.19439	0.22561	0.20209	0.24904	0.15601	0.21638
31_D	0.00346	0.00401	0.00308	0.00336	0.00343	0.00403	0.00292	0.00362	0.00350	0.00412	0.00296	0.00344	0.00308	0.00379	0.00238	0.00330
32_G	0.05569	0.06458	0.04954	0.05404	0.05527	0.06487	0.04708	0.05827	0.05640	0.06628	0.04765	0.05531	0.04954	0.06105	0.03824	0.05304
32_D	0.00305	0.00354	0.00272	0.00296	0.00303	0.00356	0.00258	0.00320	0.00309	0.00364	0.00261	0.00303	0.00272	0.00335	0.00210	0.00291
41_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
41_D	0.00030	0.00112	0.00043	0.00078	0.00018	0.00061	0.00045	0.00062	0.00023	0.00021	0.00037	0.00052	0.00030	0.00020	0.00053	0.00045
42_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
42_D	0.00060	0.00224	0.00087	0.00155	0.00035	0.00122	0.00090	0.00124	0.00045	0.00042	0.00074	0.00104	0.00059	0.00041	0.00107	0.00090
43_G	0.00002	0.00006	0.00002	0.00004	0.00001	0.00003	0.00002	0.00003	0.00001	0.00001	0.00002	0.00003	0.00002	0.00001	0.00003	0.00003
43_D	0.00165	0.00615	0.00238	0.00426	0.00096	0.00335	0.00247	0.00340	0.00124	0.00114	0.00204	0.00287	0.00163	0.00112	0.00294	0.00248
51_G	0.00049	0.00076	0.00050	0.00042	0.00053	0.00081	0.00060	0.00057	0.00037	0.00054	0.00042	0.00020	0.00058	0.00057	0.00047	0.00031
51_D	0.00088	0.00137	0.00089	0.00074	0.00095	0.00145	0.00106	0.00102	0.00066	0.00097	0.00075	0.00036	0.00104	0.00101	0.00084	0.00056
52_G	0.01053	0.01627	0.01060	0.00884	0.01129	0.01733	0.01268	0.01221	0.00784	0.01152	0.00895	0.00434	0.01237	0.01205	0.01005	0.00664
52_D	0.01880	0.02905	0.01893	0.01579	0.02015	0.03095	0.02263	0.02180	0.01399	0.02057	0.01599	0.00775	0.02209	0.02152	0.01795	0.01186
53_G	0.00037	0.00057	0.00037	0.00031	0.00040	0.00061	0.00045	0.00043	0.00028	0.00041	0.00032	0.00015	0.00044	0.00042	0.00035	0.00023
53_D	0.00066	0.00102	0.00067	0.00056	0.00071	0.00109	0.00080	0.00077	0.00049	0.00072	0.00056	0.00027	0.00078	0.00076	0.00063	0.00042
54_G	0.00039	0.00060	0.00039	0.00033	0.00042	0.00064	0.00047	0.00045	0.00029	0.00043	0.00033	0.00016	0.00046	0.00045	0.00037	0.00025
54_D	0.00069	0.00107	0.00070	0.00058	0.00074	0.00114	0.00084	0.00080	0.00052	0.00076	0.00059	0.00029	0.00082	0.00079	0.00066	0.00044
61_G	0.00296	0.00169	0.00322	0.00026	0.00397	0.00198	0.00374	0.00032	0.00408	0.00101	0.00348	0.00009	0.00614	0.00211	0.00583	0.00024
61_D	0.02955	0.01693	0.03217	0.00256	0.03962	0.01974	0.03738	0.00324	0.04079	0.01013	0.03476	0.00090	0.06136	0.02104	0.05827	0.00244
62_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
62_D	0.10760	0.06164	0.11715	0.00933	0.14430	0.07191	0.13612	0.01181	0.14856	0.03688	0.12657	0.00326	0.22345	0.07663	0.21222	0.00888

2015 Weekday VMT Mix – Houston TxDOT District (2017 Activity Scenario)

SUT/FT	AM Peak RT2	AM Peak RT3	AM Peak RT4	AM Peak RT5	Mid-Day RT2	Mid-Day RT3	Mid-Day RT4	Mid-Day RT5	PM Peak RT2	PM Peak RT3	PM Peak RT4	PM Peak RT5	Over-night RT2	Over-night RT3	Over-night RT4	Over-night RT5
11_G	0.00072	0.00065	0.00071	0.00073	0.00053	0.00058	0.00066	0.00068	0.00069	0.00066	0.00072	0.00074	0.00065	0.00068	0.00071	0.00074
21_G	0.71136	0.64264	0.70192	0.72407	0.52778	0.57229	0.65791	0.67916	0.68022	0.65715	0.71007	0.73781	0.64045	0.67524	0.70685	0.73435
21_D	0.00501	0.00453	0.00495	0.00510	0.00372	0.00403	0.00464	0.00479	0.00480	0.00463	0.00501	0.00520	0.00451	0.00476	0.00498	0.00518
31_G	0.18280	0.20838	0.18327	0.17804	0.15557	0.22723	0.19212	0.19122	0.16638	0.22204	0.18488	0.17518	0.19636	0.19137	0.16262	0.16296
31_D	0.00297	0.00339	0.00298	0.00289	0.00253	0.00369	0.00312	0.00311	0.00271	0.00361	0.00301	0.00285	0.00319	0.00311	0.00264	0.00265
32_G	0.04486	0.05113	0.04497	0.04369	0.03818	0.05576	0.04714	0.04692	0.04083	0.05449	0.04537	0.04299	0.04819	0.04696	0.03991	0.03999
32_D	0.00246	0.00280	0.00247	0.00240	0.00209	0.00306	0.00259	0.00257	0.00224	0.00299	0.00249	0.00236	0.00264	0.00258	0.00219	0.00219
41_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
41_D	0.00059	0.00046	0.00045	0.00045	0.00018	0.00030	0.00028	0.00031	0.00003	0.00014	0.00032	0.00016	0.00059	0.00017	0.00032	0.00015
42_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
42_D	0.00118	0.00091	0.00089	0.00091	0.00036	0.00060	0.00056	0.00062	0.00005	0.00027	0.00065	0.00033	0.00117	0.00034	0.00063	0.00030
43_G	0.00003	0.00003	0.00002	0.00003	0.00001	0.00002	0.00002	0.00002	0.00000	0.00001	0.00002	0.00001	0.00003	0.00001	0.00002	0.00001
43_D	0.00323	0.00251	0.00246	0.00250	0.00098	0.00164	0.00154	0.00170	0.00014	0.00075	0.00178	0.00089	0.00322	0.00093	0.00174	0.00082
51_G	0.00038	0.00079	0.00057	0.00047	0.00109	0.00113	0.00087	0.00076	0.00046	0.00056	0.00042	0.00037	0.00054	0.00059	0.00043	0.00036
51_D	0.00036	0.00075	0.00054	0.00044	0.00104	0.00108	0.00083	0.00072	0.00043	0.00054	0.00040	0.00035	0.00051	0.00056	0.00041	0.00034
52_G	0.00737	0.01510	0.01092	0.00893	0.02096	0.02174	0.01676	0.01457	0.00874	0.01083	0.00811	0.00700	0.01037	0.01133	0.00823	0.00685
52_D	0.00699	0.01433	0.01036	0.00848	0.01990	0.02064	0.01591	0.01383	0.00830	0.01028	0.00770	0.00665	0.00984	0.01075	0.00781	0.00651
53_G	0.00109	0.00224	0.00162	0.00132	0.00310	0.00322	0.00248	0.00216	0.00129	0.00160	0.00120	0.00104	0.00154	0.00168	0.00122	0.00101
53_D	0.00104	0.00212	0.00153	0.00126	0.00295	0.00306	0.00236	0.00205	0.00123	0.00152	0.00114	0.00098	0.00146	0.00159	0.00116	0.00096
54_G	0.00030	0.00062	0.00045	0.00037	0.00086	0.00089	0.00069	0.00060	0.00036	0.00044	0.00033	0.00029	0.00042	0.00046	0.00034	0.00028
54_D	0.00029	0.00059	0.00042	0.00035	0.00082	0.00085	0.00065	0.00057	0.00034	0.00042	0.00032	0.00027	0.00040	0.00044	0.00032	0.00027
61_G	0.00050	0.00085	0.00053	0.00033	0.00403	0.00145	0.00091	0.00062	0.00150	0.00050	0.00048	0.00027	0.00137	0.00086	0.00107	0.00063
61_D	0.00576	0.00983	0.00608	0.00375	0.04639	0.01669	0.01043	0.00718	0.01724	0.00577	0.00557	0.00310	0.01577	0.00992	0.01227	0.00727
62_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
62_D	0.02072	0.03536	0.02189	0.01351	0.16693	0.06007	0.03753	0.02583	0.06203	0.02077	0.02003	0.01117	0.05676	0.03568	0.04414	0.02617

2020 Weekday VMT Mix – Beaumont TxDOT District (2018 and 2020 Activity Scenarios)

SUT/FT	AM Peak RT2	AM Peak RT3	AM Peak RT4	AM Peak RT5	Mid-Day RT2	Mid-Day RT3	Mid-Day RT4	Mid-Day RT5	PM Peak RT2	PM Peak RT3	PM Peak RT4	PM Peak RT5	Over-night RT2	Over-night RT3	Over-night RT4	Over-night RT5
11_G	0.00054	0.00052	0.00055	0.00067	0.00049	0.00051	0.00053	0.00064	0.00049	0.00057	0.00056	0.00069	0.00041	0.00054	0.00049	0.00069
21_G	0.52975	0.51862	0.54774	0.66612	0.48337	0.50496	0.52939	0.63212	0.48224	0.56419	0.55093	0.68348	0.40643	0.53825	0.48415	0.68137
21_D	0.00481	0.00471	0.00497	0.00605	0.00439	0.00459	0.00481	0.00574	0.00438	0.00512	0.00500	0.00621	0.00369	0.00489	0.00440	0.00619
31_G	0.22650	0.26264	0.20149	0.21977	0.22476	0.26380	0.19149	0.23697	0.22939	0.26955	0.19380	0.22492	0.20147	0.24828	0.15553	0.21572
31_D	0.00415	0.00481	0.00369	0.00403	0.00412	0.00484	0.00351	0.00434	0.00420	0.00494	0.00355	0.00412	0.00369	0.00455	0.00285	0.00395
32_G	0.05564	0.06451	0.04949	0.05398	0.05521	0.06480	0.04703	0.05821	0.05634	0.06621	0.04760	0.05525	0.04949	0.06098	0.03820	0.05299
32_D	0.00311	0.00361	0.00277	0.00302	0.00309	0.00363	0.00263	0.00326	0.00315	0.00371	0.00266	0.00309	0.00277	0.00341	0.00214	0.00297
41_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
41_D	0.00030	0.00112	0.00043	0.00078	0.00018	0.00061	0.00045	0.00062	0.00023	0.00021	0.00037	0.00052	0.00030	0.00020	0.00053	0.00045
42_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
42_D	0.00060	0.00225	0.00087	0.00156	0.00035	0.00123	0.00090	0.00124	0.00045	0.00042	0.00075	0.00105	0.00060	0.00041	0.00107	0.00091
43_G	0.00002	0.00006	0.00002	0.00004	0.00001	0.00003	0.00002	0.00003	0.00001	0.00001	0.00002	0.00003	0.00002	0.00001	0.00003	0.00002
43_D	0.00164	0.00614	0.00237	0.00426	0.00096	0.00335	0.00246	0.00339	0.00124	0.00114	0.00204	0.00286	0.00163	0.00112	0.00293	0.00247
51_G	0.00048	0.00075	0.00049	0.00041	0.00052	0.00080	0.00058	0.00056	0.00036	0.00053	0.00041	0.00020	0.00057	0.00055	0.00046	0.00030
51_D	0.00086	0.00133	0.00087	0.00072	0.00092	0.00142	0.00104	0.00100	0.00064	0.00094	0.00073	0.00036	0.00101	0.00099	0.00082	0.00054
52_G	0.01056	0.01632	0.01064	0.00887	0.01132	0.01739	0.01272	0.01225	0.00786	0.01156	0.00898	0.00435	0.01241	0.01209	0.01009	0.00666
52_D	0.01886	0.02915	0.01899	0.01584	0.02022	0.03105	0.02271	0.02187	0.01404	0.02064	0.01604	0.00777	0.02216	0.02159	0.01801	0.01190
53_G	0.00037	0.00057	0.00037	0.00031	0.00040	0.00061	0.00045	0.00043	0.00028	0.00041	0.00032	0.00015	0.00044	0.00043	0.00036	0.00023
53_D	0.00066	0.00103	0.00067	0.00056	0.00071	0.00109	0.00080	0.00077	0.00049	0.00073	0.00056	0.00027	0.00078	0.00076	0.00063	0.00042
54_G	0.00037	0.00056	0.00037	0.00031	0.00039	0.00060	0.00044	0.00042	0.00027	0.00040	0.00031	0.00015	0.00043	0.00042	0.00035	0.00023
54_D	0.00065	0.00101	0.00066	0.00055	0.00070	0.00107	0.00079	0.00076	0.00049	0.00071	0.00055	0.00027	0.00077	0.00075	0.00062	0.00041
61_G	0.00326	0.00187	0.00355	0.00028	0.00438	0.00218	0.00413	0.00036	0.00451	0.00112	0.00384	0.00010	0.00678	0.00232	0.00644	0.00027
61_D	0.03260	0.01868	0.03550	0.00283	0.04372	0.02179	0.04125	0.00358	0.04501	0.01117	0.03835	0.00099	0.06770	0.02322	0.06430	0.00269
62_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
62_D	0.10424	0.05972	0.11349	0.00904	0.13979	0.06966	0.13187	0.01144	0.14392	0.03573	0.12261	0.00316	0.21647	0.07423	0.20559	0.00860

2020 Weekday VMT Mix – Houston TxDOT District (2018 and 2020 Activity Scenarios)

SUT/FT	AM Peak RT2	AM Peak RT3	AM Peak RT4	AM Peak RT5	Mid-Day RT2	Mid-Day RT3	Mid-Day RT4	Mid-Day RT5	PM Peak RT2	PM Peak RT3	PM Peak RT4	PM Peak RT5	Over-night RT2	Over-night RT3	Over-night RT4	Over-night RT5
11_G	0.00072	0.00065	0.00071	0.00073	0.00053	0.00058	0.00066	0.00068	0.00069	0.00066	0.00072	0.00074	0.00065	0.00068	0.00071	0.00074
21_G	0.70993	0.64134	0.70051	0.72261	0.52671	0.57114	0.65658	0.67779	0.67885	0.65583	0.70864	0.73632	0.63916	0.67388	0.70543	0.73287
21_D	0.00645	0.00582	0.00636	0.00656	0.00478	0.00519	0.00596	0.00616	0.00617	0.00596	0.00644	0.00669	0.00580	0.00612	0.00641	0.00666
31_G	0.18242	0.20795	0.18290	0.17768	0.15526	0.22677	0.19173	0.19083	0.16604	0.22159	0.18451	0.17482	0.19596	0.19098	0.16229	0.16263
31_D	0.00334	0.00381	0.00335	0.00326	0.00285	0.00416	0.00351	0.00350	0.00304	0.00406	0.00338	0.00320	0.00359	0.00350	0.00297	0.00298
32_G	0.04481	0.05108	0.04493	0.04364	0.03814	0.05570	0.04709	0.04687	0.04078	0.05443	0.04532	0.04294	0.04813	0.04691	0.03986	0.03995
32_D	0.00251	0.00286	0.00251	0.00244	0.00213	0.00312	0.00264	0.00262	0.00228	0.00305	0.00254	0.00240	0.00269	0.00263	0.00223	0.00224
41_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
41_D	0.00059	0.00046	0.00045	0.00045	0.00018	0.00030	0.00028	0.00031	0.00003	0.00014	0.00032	0.00016	0.00059	0.00017	0.00032	0.00015
42_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
42_D	0.00118	0.00092	0.00090	0.00091	0.00036	0.00060	0.00056	0.00062	0.00005	0.00028	0.00065	0.00033	0.00118	0.00034	0.00064	0.00030
43_G	0.00003	0.00003	0.00002	0.00003	0.00001	0.00002	0.00002	0.00002	0.00000	0.00001	0.00002	0.00001	0.00003	0.00001	0.00002	0.00001
43_D	0.00322	0.00251	0.00245	0.00249	0.00098	0.00163	0.00154	0.00170	0.00014	0.00075	0.00177	0.00089	0.00321	0.00093	0.00174	0.00082
51_G	0.00037	0.00077	0.00056	0.00045	0.00107	0.00111	0.00085	0.00074	0.00044	0.00055	0.00041	0.00036	0.00053	0.00058	0.00042	0.00035
51_D	0.00036	0.00073	0.00053	0.00043	0.00101	0.00105	0.00081	0.00070	0.00042	0.00052	0.00039	0.00034	0.00050	0.00055	0.00040	0.00033
52_G	0.00739	0.01515	0.01095	0.00896	0.02103	0.02181	0.01681	0.01462	0.00877	0.01087	0.00813	0.00703	0.01040	0.01136	0.00826	0.00687
52_D	0.00702	0.01438	0.01040	0.00851	0.01996	0.02070	0.01596	0.01388	0.00833	0.01032	0.00772	0.00667	0.00987	0.01079	0.00784	0.00653
53_G	0.00109	0.00224	0.00162	0.00133	0.00311	0.00323	0.00249	0.00217	0.00130	0.00161	0.00120	0.00104	0.00154	0.00168	0.00122	0.00102
53_D	0.00104	0.00213	0.00154	0.00126	0.00296	0.00307	0.00236	0.00206	0.00123	0.00153	0.00114	0.00099	0.00146	0.00160	0.00116	0.00097
54_G	0.00028	0.00058	0.00042	0.00034	0.00081	0.00084	0.00064	0.00056	0.00034	0.00042	0.00031	0.00027	0.00040	0.00044	0.00032	0.00026
54_D	0.00027	0.00055	0.00040	0.00033	0.00077	0.00079	0.00061	0.00053	0.00032	0.00040	0.00030	0.00026	0.00038	0.00041	0.00030	0.00025
61_G	0.00055	0.00094	0.00058	0.00036	0.00445	0.00160	0.00100	0.00069	0.00165	0.00055	0.00053	0.00030	0.00151	0.00095	0.00118	0.00070
61_D	0.00635	0.01084	0.00671	0.00414	0.05119	0.01842	0.01151	0.00792	0.01902	0.00637	0.00614	0.00342	0.01741	0.01094	0.01354	0.00802
62_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
62_D	0.02007	0.03426	0.02120	0.01308	0.16172	0.05819	0.03636	0.02502	0.06009	0.02012	0.01940	0.01082	0.05499	0.03456	0.04276	0.02535

2025 Weekday VMT Mix – Beaumont TxDOT District (2023, 2026, and 2027 Activity Scenarios)

SUT/FT	AM Peak RT2	AM Peak RT3	AM Peak RT4	AM Peak RT5	Mid-Day RT2	Mid-Day RT3	Mid-Day RT4	Mid-Day RT5	PM Peak RT2	PM Peak RT3	PM Peak RT4	PM Peak RT5	Over-night RT2	Over-night RT3	Over-night RT4	Over-night RT5
11_G	0.00054	0.00052	0.00055	0.00067	0.00049	0.00051	0.00053	0.00064	0.00049	0.00057	0.00056	0.00069	0.00041	0.00054	0.00049	0.00069
21_G	0.52868	0.51758	0.54663	0.66478	0.48240	0.50394	0.52832	0.63084	0.48127	0.56305	0.54982	0.68210	0.40561	0.53717	0.48317	0.68000
21_D	0.00588	0.00576	0.00608	0.00739	0.00537	0.00560	0.00588	0.00702	0.00535	0.00626	0.00612	0.00759	0.00451	0.00597	0.00537	0.00756
31_G	0.22627	0.26238	0.20128	0.21955	0.22454	0.26354	0.19129	0.23673	0.22916	0.26928	0.19360	0.22469	0.20127	0.24803	0.15537	0.21550
31_D	0.00438	0.00508	0.00390	0.00425	0.00435	0.00510	0.00370	0.00458	0.00444	0.00522	0.00375	0.00435	0.00390	0.00480	0.00301	0.00417
32_G	0.05564	0.06451	0.04949	0.05398	0.05521	0.06480	0.04703	0.05821	0.05634	0.06621	0.04760	0.05525	0.04949	0.06098	0.03820	0.05299
32_D	0.00311	0.00361	0.00277	0.00302	0.00309	0.00363	0.00263	0.00326	0.00315	0.00371	0.00266	0.00309	0.00277	0.00341	0.00214	0.00297
41_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
41_D	0.00030	0.00112	0.00043	0.00078	0.00018	0.00061	0.00045	0.00062	0.00023	0.00021	0.00037	0.00052	0.00030	0.00020	0.00053	0.00045
42_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
42_D	0.00061	0.00227	0.00088	0.00157	0.00036	0.00124	0.00091	0.00125	0.00046	0.00042	0.00075	0.00106	0.00060	0.00041	0.00108	0.00091
43_G	0.00002	0.00006	0.00002	0.00004	0.00001	0.00003	0.00002	0.00003	0.00001	0.00001	0.00002	0.00003	0.00002	0.00001	0.00003	0.00002
43_D	0.00164	0.00613	0.00236	0.00424	0.00096	0.00334	0.00246	0.00338	0.00123	0.00114	0.00203	0.00285	0.00162	0.00111	0.00292	0.00246
51_G	0.00048	0.00075	0.00049	0.00041	0.00052	0.00080	0.00058	0.00056	0.00036	0.00053	0.00041	0.00020	0.00057	0.00055	0.00046	0.00030
51_D	0.00086	0.00133	0.00087	0.00072	0.00092	0.00142	0.00104	0.00100	0.00064	0.00094	0.00073	0.00036	0.00101	0.00099	0.00082	0.00054
52_G	0.01059	0.01636	0.01066	0.00889	0.01135	0.01743	0.01274	0.01227	0.00788	0.01158	0.00900	0.00436	0.01244	0.01212	0.01011	0.00668
52_D	0.01890	0.02921	0.01903	0.01588	0.02026	0.03112	0.02276	0.02191	0.01407	0.02068	0.01608	0.00779	0.02221	0.02164	0.01805	0.01192
53_G	0.00037	0.00058	0.00038	0.00031	0.00040	0.00061	0.00045	0.00043	0.00028	0.00041	0.00032	0.00015	0.00044	0.00043	0.00036	0.00024
53_D	0.00067	0.00103	0.00067	0.00056	0.00071	0.00110	0.00080	0.00077	0.00050	0.00073	0.00057	0.00027	0.00078	0.00076	0.00064	0.00042
54_G	0.00034	0.00053	0.00034	0.00029	0.00037	0.00056	0.00041	0.00040	0.00025	0.00037	0.00029	0.00014	0.00040	0.00039	0.00033	0.00022
54_D	0.00061	0.00094	0.00061	0.00051	0.00065	0.00100	0.00073	0.00071	0.00045	0.00067	0.00052	0.00025	0.00072	0.00070	0.00058	0.00038
61_G	0.00338	0.00194	0.00368	0.00029	0.00453	0.00226	0.00427	0.00037	0.00466	0.00116	0.00397	0.00010	0.00702	0.00241	0.00666	0.00028
61_D	0.03375	0.01933	0.03674	0.00293	0.04526	0.02255	0.04270	0.00370	0.04660	0.01157	0.03970	0.00102	0.07009	0.02403	0.06656	0.00279
62_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
62_D	0.10298	0.05899	0.11212	0.00893	0.13810	0.06882	0.13028	0.01130	0.14218	0.03529	0.12113	0.00312	0.21385	0.07333	0.20310	0.00850

2025 Weekday VMT Mix – Houston TxDOT District (2023, 2026, and 2027 Activity Scenarios)

SUT/FT	AM Peak RT2	AM Peak RT3	AM Peak RT4	AM Peak RT5	Mid-Day RT2	Mid-Day RT3	Mid-Day RT4	Mid-Day RT5	PM Peak RT2	PM Peak RT3	PM Peak RT4	PM Peak RT5	Over-night RT2	Over-night RT3	Over-night RT4	Over-night RT5
11_G	0.00072	0.00065	0.00071	0.00073	0.00053	0.00058	0.00066	0.00068	0.00069	0.00066	0.00072	0.00074	0.00065	0.00068	0.00071	0.00074
21_G	0.70849	0.64005	0.69909	0.72115	0.52565	0.56999	0.65526	0.67642	0.67748	0.65450	0.70721	0.73484	0.63787	0.67252	0.70401	0.73140
21_D	0.00788	0.00712	0.00778	0.00802	0.00585	0.00634	0.00729	0.00752	0.00754	0.00728	0.00787	0.00817	0.00709	0.00748	0.00783	0.00813
31_G	0.18224	0.20774	0.18272	0.17749	0.15510	0.22653	0.19153	0.19064	0.16588	0.22137	0.18432	0.17464	0.19576	0.19079	0.16213	0.16247
31_D	0.00353	0.00402	0.00354	0.00344	0.00300	0.00439	0.00371	0.00369	0.00321	0.00429	0.00357	0.00338	0.00379	0.00370	0.00314	0.00315
32_G	0.04481	0.05108	0.04493	0.04364	0.03814	0.05570	0.04709	0.04687	0.04078	0.05443	0.04532	0.04294	0.04813	0.04691	0.03986	0.03995
32_D	0.00251	0.00286	0.00251	0.00244	0.00213	0.00312	0.00264	0.00262	0.00228	0.00305	0.00254	0.00240	0.00269	0.00263	0.00223	0.00224
41_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
41_D	0.00059	0.00046	0.00045	0.00045	0.00018	0.00030	0.00028	0.00031	0.00003	0.00014	0.00032	0.00016	0.00059	0.00017	0.00032	0.00015
42_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
42_D	0.00119	0.00093	0.00091	0.00092	0.00036	0.00060	0.00057	0.00063	0.00005	0.00028	0.00066	0.00033	0.00119	0.00034	0.00064	0.00030
43_G	0.00003	0.00003	0.00002	0.00003	0.00001	0.00002	0.00002	0.00002	0.00000	0.00001	0.00002	0.00001	0.00003	0.00001	0.00002	0.00001
43_D	0.00321	0.00250	0.00245	0.00248	0.00098	0.00163	0.00154	0.00169	0.00014	0.00075	0.00177	0.00089	0.00320	0.00092	0.00173	0.00082
51_G	0.00037	0.00077	0.00056	0.00045	0.00107	0.00111	0.00085	0.00074	0.00044	0.00055	0.00041	0.00036	0.00053	0.00058	0.00042	0.00035
51_D	0.00036	0.00073	0.00053	0.00043	0.00101	0.00105	0.00081	0.00070	0.00042	0.00052	0.00039	0.00034	0.00050	0.00055	0.00040	0.00033
52_G	0.00741	0.01518	0.01097	0.00898	0.02107	0.02185	0.01685	0.01465	0.00879	0.01089	0.00815	0.00704	0.01042	0.01139	0.00827	0.00689
52_D	0.00703	0.01441	0.01042	0.00852	0.02001	0.02075	0.01600	0.01391	0.00834	0.01034	0.00774	0.00669	0.00989	0.01081	0.00785	0.00654
53_G	0.00110	0.00225	0.00163	0.00133	0.00312	0.00324	0.00250	0.00217	0.00130	0.00161	0.00121	0.00104	0.00154	0.00169	0.00123	0.00102
53_D	0.00104	0.00213	0.00154	0.00126	0.00296	0.00307	0.00237	0.00206	0.00124	0.00153	0.00115	0.00099	0.00147	0.00160	0.00116	0.00097
54_G	0.00027	0.00054	0.00039	0.00032	0.00075	0.00078	0.00060	0.00052	0.00031	0.00039	0.00029	0.00025	0.00037	0.00041	0.00030	0.00025
54_D	0.00025	0.00052	0.00037	0.00031	0.00072	0.00074	0.00057	0.00050	0.00030	0.00037	0.00028	0.00024	0.00035	0.00039	0.00028	0.00023
61_G	0.00057	0.00098	0.00060	0.00037	0.00461	0.00166	0.00104	0.00071	0.00171	0.00057	0.00055	0.00031	0.00157	0.00098	0.00122	0.00072
61_D	0.00658	0.01123	0.00695	0.00429	0.05299	0.01907	0.01191	0.00820	0.01969	0.00659	0.00636	0.00354	0.01802	0.01133	0.01401	0.00831
62_G	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
62_D	0.01983	0.03384	0.02095	0.01293	0.15976	0.05749	0.03592	0.02472	0.05937	0.01988	0.01917	0.01069	0.05432	0.03415	0.04224	0.02504

APPENDIX D:
TXDOT DISTRICT AGGREGATE WEEKDAY VMT MIX

TxDOT District/HGB Counties

TxDOT District	District Code	HGB County	County FIPS
Beaumont	D05	Chambers	48071
Beaumont	D05	Liberty	48291
Houston	D13	Brazoria	48039
Houston	D13	Fort Bend	48157
Houston	D13	Galveston	48167
Houston	D13	Harris	48201
Houston	D13	Montgomery	48339
Houston	D13	Waller	48473

VMT Mix Year/Analysis Year Correlations

VMT Mix Year	Analysis Years
2000	1998 through 2002
2005	2003 through 2007
2010	2008 through 2012
2015	2013 through 2017
2020	2018 through 2022
2025	2023 through 2027
2030	2028 through 2032

Aggregate Weekday VMT Mix – Beaumont TxDOT District

SUT/FT	2010[1]	2015[2]	2020[3]	2025[4]
11_G	0.00053	0.00053	0.00053	0.00053
21_G	0.52888	0.52728	0.52622	0.52516
21_D	0.00212	0.00372	0.00478	0.00584
31_G	0.21812	0.21872	0.21805	0.21783
31_D	0.00310	0.00333	0.00400	0.00422
32_G	0.05435	0.05362	0.05356	0.05356
32_D	0.00304	0.00294	0.00300	0.00300
41_G	0	0	0	0
41_D	0.00150	0.00048	0.00048	0.00048
42_G	0	0	0	0
42_D	0.00062	0.00095	0.00096	0.00096
43_G	0.00002	0.00003	0.00003	0.00003
43_D	0.00193	0.00262	0.00261	0.00260
51_G	0.00058	0.00059	0.00058	0.00058
51_D	0.00103	0.00105	0.00103	0.00103
52_G	0.01257	0.01253	0.01257	0.01260
52_D	0.02245	0.02238	0.02245	0.02250
53_G	0.00044	0.00044	0.00044	0.00044
53_D	0.00079	0.00079	0.00079	0.00079
54_G	0.00043	0.00046	0.00043	0.00041
54_D	0.00078	0.00083	0.00078	0.00073
61_G	0.00310	0.00310	0.00342	0.00354
61_D	0.03094	0.03094	0.03414	0.03534
62_G	0	0	0	0
62_D	0.11268	0.11268	0.10916	0.10784

[1] 2011 activity scenario.
[2] 2017 activity scenario.
[3] 2018 and 2020 activity scenarios
[4] 2023, 2026, and 2027 activity scenarios.

Aggregate Weekday VMT Mix – Houston TxDOT District

SUT/FT	2010[1]	2015[2]	2020[3]	2025[4]
11_G	0.00069	0.00069	0.00069	0.00069
21_G	0.68452	0.68246	0.68109	0.67971
21_D	0.00275	0.00481	0.00619	0.00756
31_G	0.18512	0.18545	0.18507	0.18488
31_D	0.00263	0.00302	0.00339	0.00358
32_G	0.04613	0.04551	0.04546	0.04546
32_D	0.00258	0.00250	0.00254	0.00254
41_G	0	0	0	0
41_D	0.00103	0.00033	0.00033	0.00033
42_G	0	0	0	0
42_D	0.00042	0.00065	0.00065	0.00066
43_G	0.00001	0.00002	0.00002	0.00002
43_D	0.00132	0.00179	0.00179	0.00178
51_G	0.00064	0.00066	0.00064	0.00064
51_D	0.00061	0.00063	0.00061	0.00061
52_G	0.01268	0.01264	0.01268	0.01271
52_D	0.01204	0.01200	0.01204	0.01207
53_G	0.00188	0.00187	0.00188	0.00188
53_D	0.00178	0.00178	0.00178	0.00179
54_G	0.00049	0.00052	0.00049	0.00046
54_D	0.00046	0.00049	0.00046	0.00043
61_G	0.00078	0.00078	0.00086	0.00089
61_D	0.00901	0.00901	0.00994	0.01029
62_G	0	0	0	0
62_D	0.03241	0.03241	0.03140	0.03102

[1] 2011 activity scenario.
[2] 2017 activity scenario.
[3] 2018 and 2020 activity scenarios
[4] 2023, 2026, and 2027 activity scenarios.

APPENDIX E:
CAPACITY FACTORS, SPEED FACTORS, AND SPEED REDUCTION FACTORS

Capacity Factors

Time of Day Assignment	Capacity Factor[1]
AM Peak	0.3333333
Mid-Day	0.1666667
PM Peak	0.2500000
Overnight	0.0909091

[1] To obtain hourly capacities, a single capacity factor for each time-of-day assignment is used for all area types and functional classifications.

Free-Flow (V/C=0) Speed Factors for Houston/Galveston Speed Model

Functional Class Code and Description	Area Type Code and Description	Distance Weighted Input Speeds[1]	Distance Weighted Free-Flow Speeds[2]	Free-Flow Speed Factor[3]
1 - Urban Interstate	1 - CBD	50.85	56.40	1.10906
1 - Urban Interstate	2 - Urban	52.55	61.40	1.16842
2 - Urban Other Freeway	1 - CBD	N/A	58.00	1.21154
2 - Urban Other Freeway	2 - Urban	52.00	63.00	1.21154
3 - Toll Road	1 - CBD	N/A	34.50	0.62652
3 - Toll Road	2 - Urban	57.58	36.08	0.62652
3 - Toll Road	3 - Urban Fringe	61.69	36.14	0.58577
3 - Toll Road	4 - Suburban	64.34	37.99	0.59040
3 - Toll Road	5 - Rural	59.13	38.43	0.64991
4 - Ramp	1 - CBD	28.62	35.13	1.22734
4 - Ramp	2 - Urban	40.06	36.26	0.90509
4 - Ramp	3 - Urban Fringe	43.22	38.52	0.89119
4 - Ramp	4 - Suburban	44.82	45.71	1.01987
4 - Ramp	5 - Rural	55.16	52.11	0.94478
5 - Urban Principal Arterial	1 - CBD	24.72	26.52	1.07262
5 - Urban Principal Arterial	2 - Urban	35.78	29.69	0.82974
6 - Urban Other Arterial	1 - CBD	22.00	24.64	1.11996
6 - Urban Other Arterial	2 - Urban	34.57	27.31	0.79001
7 - Urban Collector	1 - CBD	20.94	24.17	1.15413
7 - Urban Collector	2 - Urban	35.36	25.78	0.72901
10 - Rural Interstate	3 - Urban Fringe	57.84	61.40	1.06152
10 - Rural Interstate	4 - Suburban	59.15	67.20	1.13613
10 - Rural Interstate	5 - Rural	62.00	68.57	1.10599
11 - Rural Other Freeway	3 - Urban Fringe	62.00	63.00	1.01613
11 - Rural Other Freeway	4 - Suburban	62.00	69.00	1.11290
11 - Rural Other Freeway	5 - Rural	64.00	71.00	1.10938
12 - Rural Principal Arterial	3 - Urban Fringe	40.23	33.75	0.83890
12 - Rural Principal Arterial	4 - Suburban	46.12	42.48	0.92125
12 - Rural Principal Arterial	5 - Rural	60.00	55.53	0.92536
13 - Rural Other Arterial	3 - Urban Fringe	39.05	30.51	0.78131
13 - Rural Other Arterial	4 - Suburban	43.03	39.85	0.92612
13 - Rural Other Arterial	5 - Rural	53.97	54.07	1.00194
14 - Rural Major Collector	3 - Urban Fringe	38.00	27.76	0.73061
14 - Rural Major Collector	4 - Suburban	41.00	49.22	1.20059
14 - Rural Major Collector	5 - Rural	53.00	54.06	1.02009
15 - Rural Collector	3 - Urban Fringe	36.00	24.07	0.66864
15 - Rural Collector	4 - Suburban	40.00	35.58	0.88938
15 - Rural Collector	5 - Rural	49.00	49.86	1.01762

[1] Based on 2012 TDM data.

[2] Calculated from detailed speed model runs by H-GAC with link volumes set to 0 (V/C=0).

[3] When input speeds are not available, speed factors are taken from the nearest area type.

LOS E (V/C=1) Speed Factors for Houston/Galveston Speed Model

Functional Class Code and Description	Area Type Code and Description	Distance Weighted Input Speeds[1]	Distance Weighted Free-Flow Speeds[2]	Free-Flow Speed Factor[3]
1 - Urban Interstate	1 - CBD	50.85	34.35	0.67549
1 - Urban Interstate	2 - Urban	52.55	34.35	0.65370
2 - Urban Other Freeway	1 - CBD	N/A	35.00	0.67308
2 - Urban Other Freeway	2 - Urban	52.00	35.00	0.67308
3 - Toll Road	1 - CBD	N/A	24.77	0.43011
3 - Toll Road	2 - Urban	57.58	24.77	0.43011
3 - Toll Road	3 - Urban Fringe	61.69	26.52	0.42983
3 - Toll Road	4 - Suburban	64.34	29.54	0.45920
3 - Toll Road	5 - Rural	59.13	29.70	0.50229
4 - Ramp	1 - CBD	28.62	31.68	1.10692
4 - Ramp	2 - Urban	40.06	30.03	0.74952
4 - Ramp	3 - Urban Fringe	43.22	33.24	0.76908
4 - Ramp	4 - Suburban	44.82	41.22	0.91979
4 - Ramp	5 - Rural	55.16	49.01	0.88861
5 - Urban Principal Arterial	1 - CBD	24.72	22.13	0.89529
5 - Urban Principal Arterial	2 - Urban	35.78	24.44	0.68294
6 - Urban Other Arterial	1 - CBD	22.00	20.80	0.94565
6 - Urban Other Arterial	2 - Urban	34.57	22.76	0.65833
7 - Urban Collector	1 - CBD	20.94	20.06	0.95782
7 - Urban Collector	2 - Urban	35.36	21.23	0.60033
10 - Rural Interstate	3 - Urban Fringe	57.84	39.25	0.67860
10 - Rural Interstate	4 - Suburban	59.15	49.08	0.82973
10 - Rural Interstate	5 - Rural	62.00	49.08	0.79157
11 - Rural Other Freeway	3 - Urban Fringe	62.00	40.00	0.64516
11 - Rural Other Freeway	4 - Suburban	62.00	50.00	0.80645
11 - Rural Other Freeway	5 - Rural	64.00	50.00	0.78125
12 - Rural Principal Arterial	3 - Urban Fringe	40.23	27.30	0.67871
12 - Rural Principal Arterial	4 - Suburban	46.12	32.64	0.70784
12 - Rural Principal Arterial	5 - Rural	60.00	38.32	0.63858
13 - Rural Other Arterial	3 - Urban Fringe	39.05	24.81	0.63540
13 - Rural Other Arterial	4 - Suburban	43.03	30.15	0.70070
13 - Rural Other Arterial	5 - Rural	53.97	38.46	0.71270
14 - Rural Major Collector	3 - Urban Fringe	38.00	22.22	0.58465
14 - Rural Major Collector	4 - Suburban	41.00	34.09	0.83151
14 - Rural Major Collector	5 - Rural	53.00	36.83	0.69499
15 - Rural Collector	3 - Urban Fringe	36.00	19.74	0.54845
15 - Rural Collector	4 - Suburban	40.00	26.40	0.65994
15 - Rural Collector	5 - Rural	49.00	34.33	0.70057

[1] Based on 2012 TDM data.

[2] Calculated from detailed speed model runs by H-GAC with link volumes set to 0 (V/C=0).

[3] When input speeds are not available, speed factors are taken from the nearest area type.

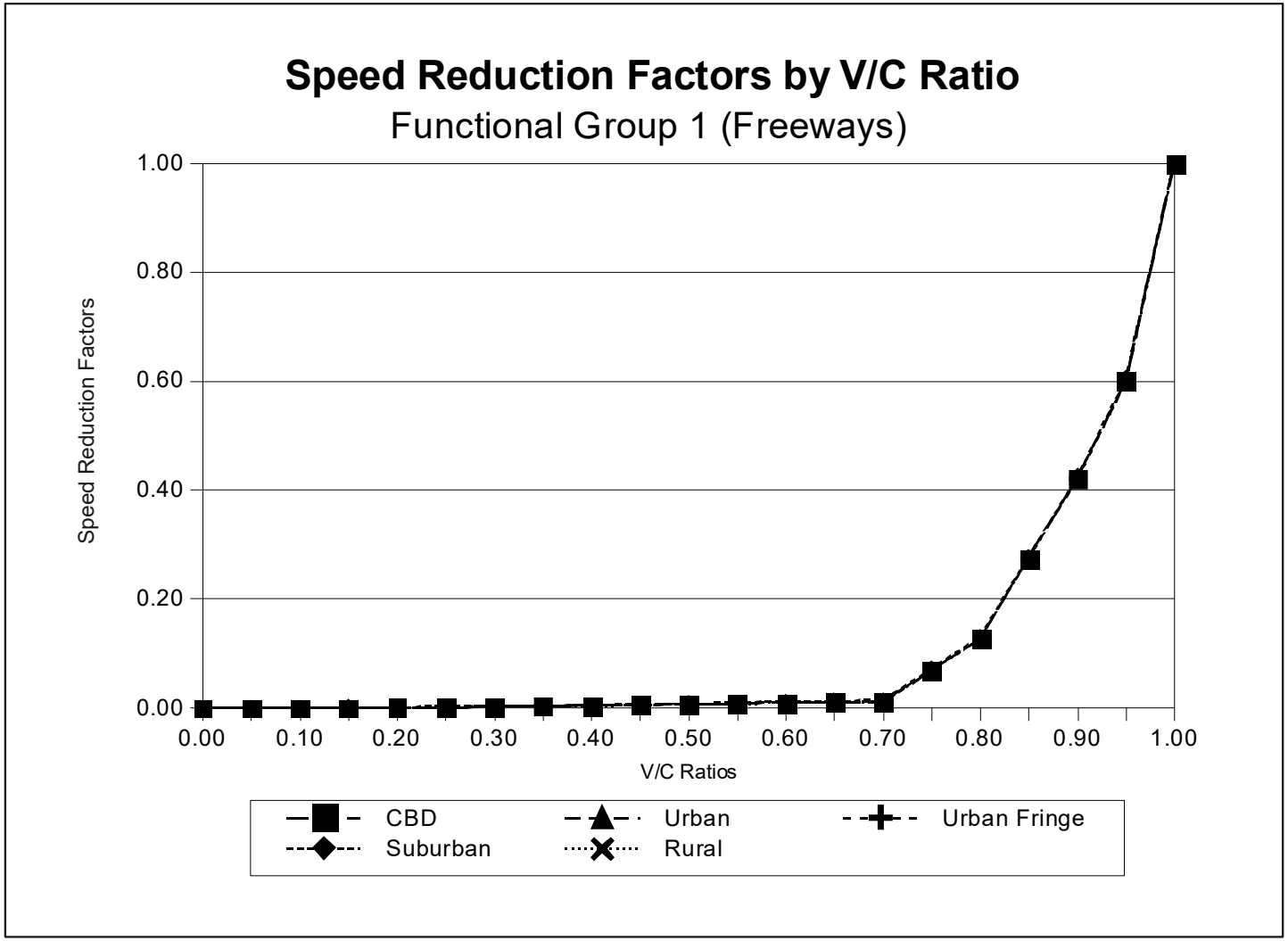

Figure 1. Freeway Speed Reduction Factors by V/C Ratio.

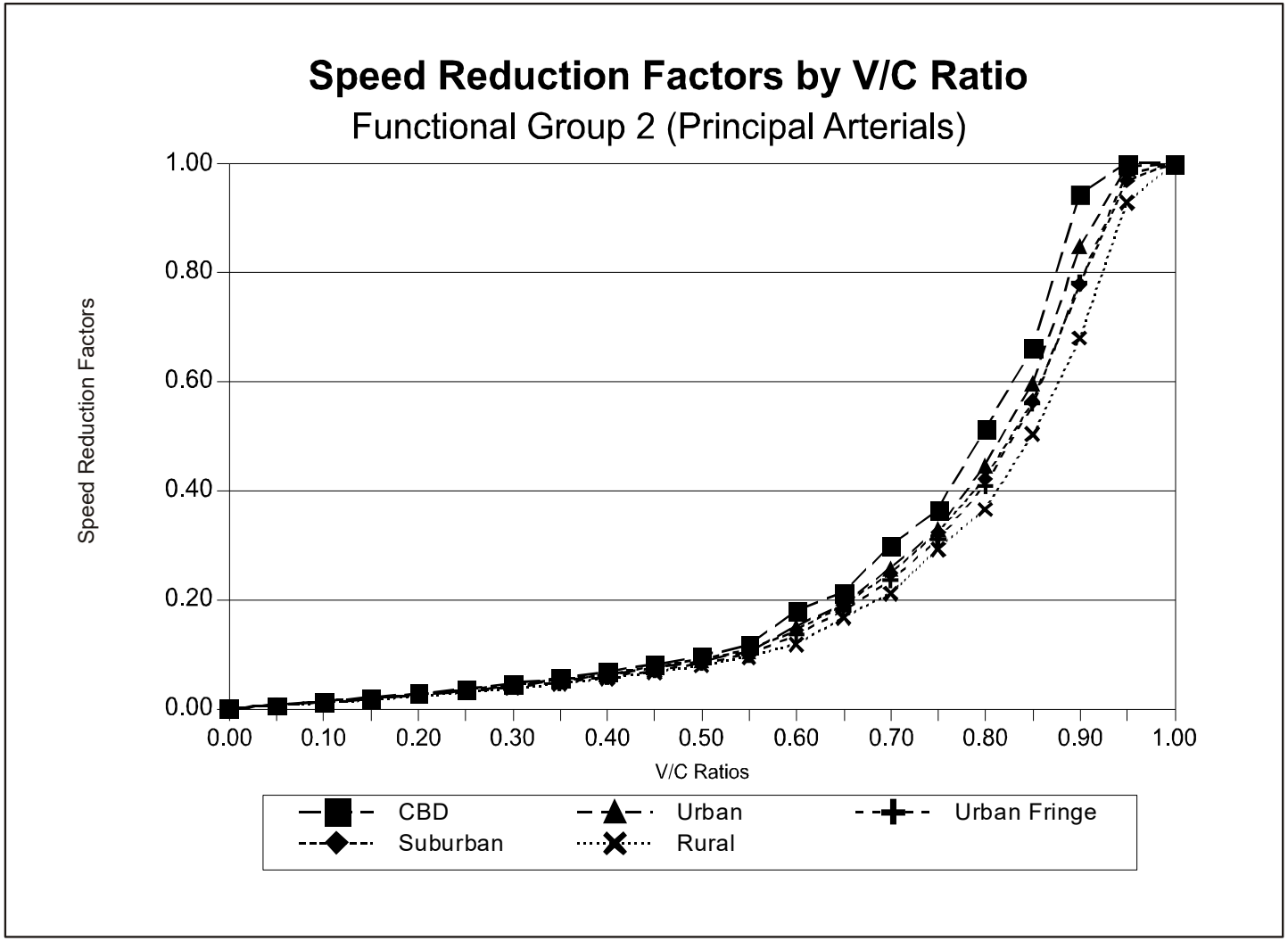

Figure 2. Principal Arterial Speed Reduction Factors by V/C Ratio.

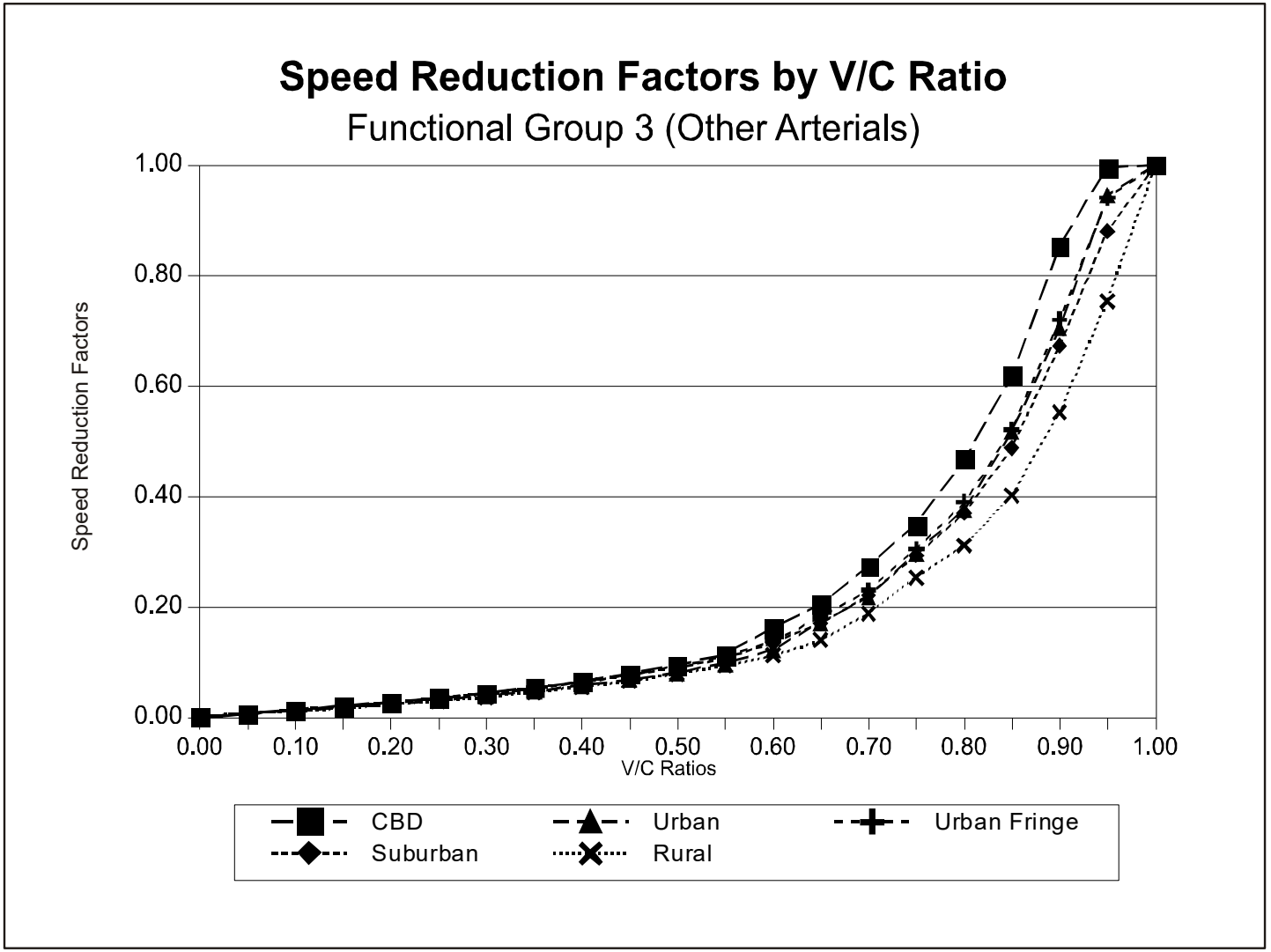

Figure 3. Other Arterial Speed Reduction Factors by V/C Ratio.

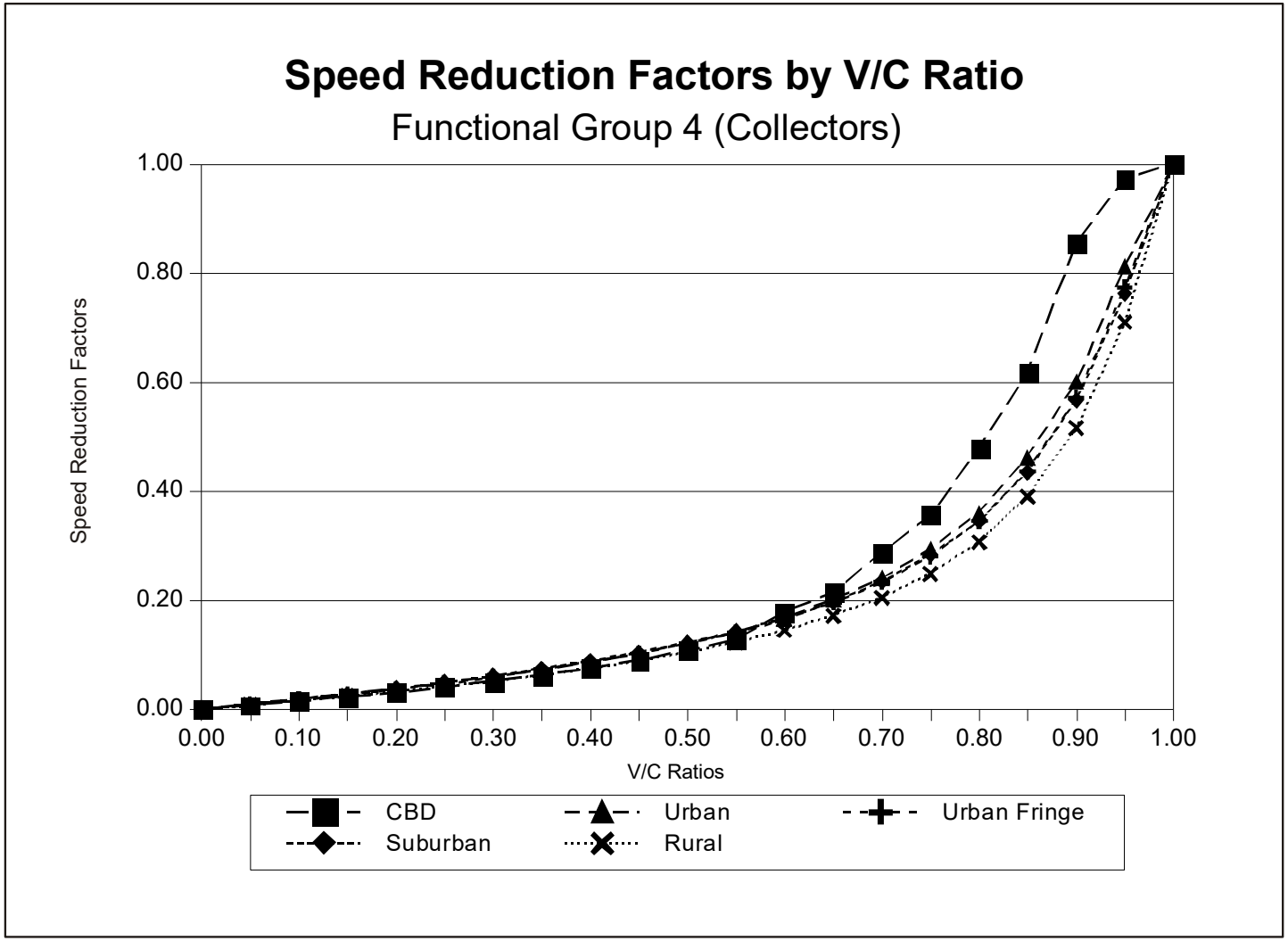

Figure 4. Collector Speed Reduction Factors by V/C Ratio.

Functional Classification to Functional Group Relationship for the Application of Speed Reduction Factors.

Functional Group	Corresponding Network Functional Classifications
1. Freeways, Interstates	1. Urban Interstate Freeways 2. Urban Other Freeways 3. Toll Roads 10. Rural Interstate Freeways 11. Rural Other Freeways
2. Principal Arterials	5. Urban Principal Arterials 12. Rural Principal Arterials
3. Other Arterials, Major Collectors	6. Urban Other Arterials 13. Rural Other Arterials 14. Rural Major Collectors
4. Collectors	4. Ramps 7. Urban Collectors 15. Rural Collectors

APPENDIX F:
VEHICLE POPULATION ESTIMATES AND 24-HOUR SHP, STARTS, SHEI, AND APU SUMMARIES

TxDOT District/HGB Counties

TxDOT District	District Code	HGB County	County FIPS
Beaumont	D05	Chambers	48071
Beaumont	D05	Liberty	48291
Houston	D13	Brazoria	48039
Houston	D13	Fort Bend	48157
Houston	D13	Galveston	48167
Houston	D13	Harris	48201
Houston	D13	Montgomery	48339
Houston	D13	Waller	48473

2011 Vehicle Population Estimates by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	3,673	609	4,946	4,914	30,191	1,155	7,427	638
21_G	126,792	19,243	338,639	139,800	2,003,807	33,939	257,092	19,141
21_D	509	77	1,360	562	8,050	136	1,033	77
31_G	40,408	9,234	51,615	40,833	455,169	17,714	69,316	8,583
31_D	574	131	733	580	6,467	252	985	122
32_G	10,069	2,301	12,862	10,175	113,424	4,414	17,273	2,139
32_D	563	129	719	569	6,344	247	966	120
41_G	0	0	0	0	0	0	0	0
41_D	309	124	296	265	2,681	169	538	93
42_G	0	0	0	0	0	0	0	0
42_D	126	51	121	108	1,093	70	220	38
43_G	3	2	3	3	26	2	5	1
43_D	397	160	379	340	3,436	218	690	120
51_G	192	48	184	165	1,666	65	334	58
51_D	183	85	175	157	1,588	116	319	55
52_G	3,810	1,041	3,641	3,265	33,007	1,419	6,627	1,150
52_D	3,618	1,859	3,457	3,100	31,341	2,534	6,293	1,092
53_G	565	36	540	484	4,894	50	983	170
53_D	535	65	511	458	4,633	89	930	161
54_G	147	36	141	126	1,275	49	256	44
54_D	138	65	132	118	1,197	88	240	42
61_G	148	72	298	79	3,926	118	297	61
61_D	1,710	720	3,441	909	45,353	1,173	3,436	707
62_G	0	0	0	0	0	0	0	0
62_D	6,151	2,621	12,376	3,271	163,139	4,273	12,358	2,544

2017 Vehicle Population Estimates by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	5,239	660	6,394	6,120	35,178	1,228	9,244	768
21_G	180,297	20,817	436,430	173,565	2,327,728	35,975	319,025	22,983
21_D	1,271	147	3,076	1,223	16,406	254	2,249	162
31_G	57,731	10,048	66,834	50,935	531,245	18,886	86,420	10,355
31_D	940	153	1,088	829	8,651	288	1,407	169
32_G	14,167	2,463	16,401	12,500	130,369	4,630	21,208	2,541
32_D	778	135	901	687	7,162	254	1,165	140
41_G	0	0	0	0	0	0	0	0
41_D	141	43	122	106	1,000	58	214	36
42_G	0	0	0	0	0	0	0	0
42_D	278	85	241	208	1,969	114	422	71
43_G	9	3	7	6	61	4	13	2
43_D	766	235	664	573	5,424	314	1,163	195
51_G	283	53	245	211	2,000	71	429	72
51_D	270	94	234	202	1,909	126	409	69
52_G	5,412	1,126	4,687	4,049	38,298	1,504	8,214	1,379
52_D	5,138	2,011	4,449	3,844	36,359	2,686	7,798	1,309
53_G	801	40	693	599	5,666	53	1,215	204
53_D	762	71	660	570	5,393	95	1,157	194
54_G	223	41	193	167	1,576	55	338	57
54_D	210	75	182	157	1,485	100	318	53
61_G	211	78	385	98	4,575	125	370	74
61_D	2,439	781	4,447	1,132	52,843	1,247	4,276	852
62_G	0	0	0	0	0	0	0	0
62_D	8,774	2,843	15,998	4,073	190,082	4,543	15,382	3,064

2018 Vehicle Population Estimates by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	5,405	668	6,797	6,213	36,182	1,254	9,617	786
21_G	185,619	21,017	462,995	175,856	2,389,345	36,650	331,244	23,469
21_D	1,687	191	4,208	1,598	21,715	333	3,010	213
31_G	59,438	10,134	70,907	51,610	545,339	19,220	89,735	10,575
31_D	1,089	186	1,299	945	9,989	353	1,644	194
32_G	14,600	2,489	17,417	12,677	133,955	4,721	22,042	2,598
32_D	816	139	973	708	7,485	264	1,232	145
41_G	0	0	0	0	0	0	0	0
41_D	146	44	130	107	1,029	59	223	37
42_G	0	0	0	0	0	0	0	0
42_D	287	87	256	212	2,027	118	440	73
43_G	9	3	8	7	62	4	14	2
43_D	791	237	706	583	5,582	320	1,211	200
51_G	283	53	252	208	1,996	71	433	71
51_D	270	94	241	199	1,902	126	413	68
52_G	5,604	1,142	5,001	4,127	39,543	1,540	8,579	1,416
52_D	5,321	2,040	4,749	3,918	37,547	2,750	8,146	1,345
53_G	831	40	741	612	5,863	54	1,272	210
53_D	787	72	702	579	5,551	97	1,204	199
54_G	217	39	193	159	1,528	53	332	55
54_D	203	71	181	150	1,435	96	311	51
61_G	218	79	409	99	4,703	128	385	75
61_D	2,516	790	4,728	1,150	54,354	1,273	4,449	872
62_G	0	0	0	0	0	0	0	0
62_D	7,949	2,526	14,935	3,631	171,703	4,072	14,054	2,753

2020 Vehicle Population Estimates by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	5,666	733	7,785	6,263	37,450	1,586	10,193	847
21_G	194,583	23,049	530,313	177,274	2,473,110	46,347	351,069	25,304
21_D	1,768	209	4,820	1,611	22,477	421	3,191	230
31_G	62,309	11,113	81,216	52,026	564,457	24,305	95,105	11,402
31_D	1,141	204	1,488	953	10,339	446	1,742	209
32_G	15,305	2,730	19,950	12,780	138,651	5,970	23,361	2,801
32_D	855	153	1,115	714	7,747	334	1,305	156
41_G	0	0	0	0	0	0	0	0
41_D	153	48	149	108	1,065	74	237	40
42_G	0	0	0	0	0	0	0	0
42_D	301	96	294	213	2,098	149	466	78
43_G	9	3	9	7	65	5	14	2
43_D	829	260	809	587	5,778	404	1,284	216
51_G	297	58	289	210	2,066	90	459	77
51_D	283	103	276	200	1,969	160	437	73
52_G	5,875	1,253	5,728	4,160	40,929	1,947	9,092	1,527
52_D	5,578	2,238	5,439	3,950	38,863	3,478	8,633	1,450
53_G	871	44	849	617	6,068	68	1,348	226
53_D	825	79	804	584	5,746	122	1,276	214
54_G	227	43	221	161	1,582	67	351	59
54_D	213	78	208	151	1,485	121	330	55
61_G	228	87	469	100	4,868	161	408	81
61_D	2,638	866	5,415	1,159	56,260	1,610	4,715	940
62_G	0	0	0	0	0	0	0	0
62_D	8,333	2,770	17,107	3,661	177,722	5,149	14,896	2,969

2023 Vehicle Population Estimates by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	5,929	772	8,657	6,514	39,431	1,668	10,956	924
21_G	203,211	24,239	588,496	183,991	2,598,680	48,638	376,603	27,544
21_D	2,260	270	6,545	2,046	28,904	541	4,189	306
31_G	65,136	11,699	90,216	54,051	593,703	25,532	102,123	12,423
31_D	1,261	227	1,747	1,047	11,496	495	1,978	241
32_G	16,016	2,877	22,183	13,291	145,985	6,278	25,111	3,055
32_D	895	161	1,239	743	8,157	352	1,403	171
41_G	0	0	0	0	0	0	0	0
41_D	160	50	166	113	1,122	78	254	43
42_G	0	0	0	0	0	0	0	0
42_D	320	101	332	225	2,243	156	509	87
43_G	10	3	10	7	68	5	15	3
43_D	863	273	894	607	6,049	424	1,372	234
51_G	310	61	321	218	2,175	94	493	84
51_D	296	108	306	208	2,073	168	470	80
52_G	6,162	1,323	6,385	4,337	43,196	2,052	9,797	1,669
52_D	5,852	2,363	6,063	4,118	41,021	3,665	9,303	1,585
53_G	911	46	944	641	6,389	72	1,449	247
53_D	868	83	899	611	6,083	129	1,380	235
54_G	223	43	231	157	1,563	67	355	60
54_D	208	77	216	147	1,461	119	331	56
61_G	239	91	521	104	5,124	170	438	89
61_D	2,760	913	6,022	1,205	59,237	1,693	5,069	1,025
62_G	0	0	0	0	0	0	0	0
62_D	8,321	2,785	18,153	3,633	178,575	5,167	15,280	3,090

2026 Vehicle Population Estimates by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	6,321	782	9,403	6,734	41,103	1,720	11,586	975
21_G	216,641	24,555	639,203	190,207	2,708,867	50,174	398,245	29,063
21_D	2,410	273	7,109	2,116	30,129	558	4,429	323
31_G	69,440	11,851	97,989	55,877	618,876	26,339	107,992	13,108
31_D	1,345	230	1,897	1,082	11,984	510	2,091	254
32_G	17,075	2,914	24,095	13,740	152,175	6,476	26,554	3,223
32_D	954	163	1,346	768	8,503	363	1,484	180
41_G	0	0	0	0	0	0	0	0
41_D	171	51	180	116	1,169	81	269	46
42_G	0	0	0	0	0	0	0	0
42_D	341	102	360	233	2,338	161	538	91
43_G	10	3	11	7	71	5	16	3
43_D	920	277	971	628	6,306	437	1,451	247
51_G	331	62	349	226	2,267	97	522	89
51_D	315	110	333	215	2,161	173	497	85
52_G	6,570	1,341	6,935	4,483	45,027	2,117	10,359	1,761
52_D	6,239	2,394	6,586	4,257	42,760	3,781	9,838	1,673
53_G	972	47	1,026	663	6,660	74	1,532	261
53_D	925	84	977	631	6,341	133	1,459	248
54_G	238	44	251	162	1,630	69	375	64
54_D	222	78	235	152	1,523	123	350	60
61_G	255	93	566	108	5,341	175	464	94
61_D	2,943	925	6,541	1,246	61,749	1,747	5,360	1,082
62_G	0	0	0	0	0	0	0	0
62_D	8,871	2,822	19,717	3,756	186,146	5,331	16,158	3,260

2027 Vehicle Population Estimates by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	6,413	784	9,639	6,784	41,694	1,734	11,823	997
21_G	219,801	24,610	655,272	191,619	2,747,799	50,575	406,398	29,711
21_D	2,445	274	7,288	2,131	30,562	562	4,520	330
31_G	70,453	11,878	100,453	56,292	627,771	26,549	110,203	13,401
31_D	1,364	230	1,945	1,090	12,156	514	2,134	259
32_G	17,324	2,921	24,700	13,842	154,362	6,528	27,098	3,295
32_D	968	164	1,380	773	8,625	366	1,514	184
41_G	0	0	0	0	0	0	0	0
41_D	173	51	185	117	1,186	81	274	47
42_G	0	0	0	0	0	0	0	0
42_D	346	102	369	235	2,372	163	549	94
43_G	10	3	11	7	72	5	17	3
43_D	933	277	996	632	6,397	440	1,481	252
51_G	336	62	358	227	2,300	98	532	91
51_D	320	110	341	217	2,192	174	507	86
52_G	6,665	1,344	7,109	4,516	45,674	2,134	10,572	1,801
52_D	6,330	2,399	6,751	4,289	43,375	3,811	10,039	1,710
53_G	986	47	1,052	668	6,756	75	1,564	266
53_D	939	84	1,001	636	6,433	134	1,489	254
54_G	241	44	257	163	1,653	69	383	65
54_D	225	78	241	153	1,545	124	358	61
61_G	258	93	580	109	5,418	176	473	96
61_D	2,986	927	6,705	1,255	62,636	1,761	5,470	1,106
62_G	0	0	0	0	0	0	0	0
62_D	9,001	2,828	20,213	3,784	188,822	5,373	16,489	3,333

2011 24-Hour Weekday ONI Hour Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	0	0	0	0	0	0	0	0
21_G	30,587	9,488	52,333	33,300	591,807	8,688	58,631	8,538
21_D	123	38	210	134	2,378	35	236	34
31_G	9,049	4,637	15,084	8,682	152,200	4,067	17,877	2,918
31_D	128	66	214	123	2,160	58	254	41
32_G	2,255	1,155	3,759	2,163	37,928	1,014	4,455	727
32_D	126	65	210	121	2,122	57	249	41
41_G	0	0	0	0	0	0	0	0
41_D	69	48	127	76	1,582	44	145	20
42_G	0	0	0	0	0	0	0	0
42_D	19	16	34	19	373	13	41	6
43_G	0	0	1	0	6	0	1	0
43_D	36	32	61	33	598	26	78	13
51_G	87	34	143	76	1,414	28	176	31
51_D	82	60	135	72	1,339	50	167	29
52_G	997	435	1,634	855	15,350	366	2,028	367
52_D	946	778	1,551	812	14,574	653	1,926	348
53_G	148	15	242	127	2,276	13	300	54
53_D	140	27	230	120	2,162	23	286	52
54_G	0	0	0	0	0	0	0	0
54_D	0	0	0	0	0	0	0	0
61_G	53	46	85	41	714	37	109	21
61_D	609	463	974	474	8,221	368	1,251	242
62_G	0	0	0	0	0	0	0	0
62_D	673	553	1,052	468	7,000	436	1,387	292

2017 24-Hour Weekday ONI Hour Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	0	0	0	0	0	0	0	0
21_G	42,230	8,692	69,724	38,387	665,127	8,950	75,488	10,025
21_D	298	61	492	271	4,689	63	532	71
31_G	11,901	4,090	18,626	9,903	171,768	4,027	21,028	3,161
31_D	193	62	303	161	2,793	61	342	51
32_G	2,920	1,003	4,571	2,430	42,150	987	5,160	776
32_D	160	55	251	133	2,313	54	283	43
41_G	0	0	0	0	0	0	0	0
41_D	31	10	53	29	536	15	59	7
42_G	0	0	0	0	0	0	0	0
42_D	45	18	71	39	726	24	85	13
43_G	1	0	1	1	13	0	2	0
43_D	79	33	116	63	1,176	45	146	24
51_G	107	25	164	88	1,543	26	191	31
51_D	102	45	156	83	1,462	47	182	30
52_G	1,212	320	1,818	960	16,858	339	2,141	354
52_D	1,151	571	1,726	912	16,006	605	2,032	336
53_G	179	11	269	142	2,497	12	317	52
53_D	170	20	255	135	2,369	21	301	50
54_G	0	0	0	0	0	0	0	0
54_D	0	0	0	0	0	0	0	0
61_G	72	71	94	49	824	37	121	28
61_D	831	711	1,085	561	9,482	367	1,392	324
62_G	0	0	0	0	0	0	0	0
62_D	945	867	1,131	560	9,290	447	1,551	384

2018 24-Hour Weekday ONI Hour Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	0	0	0	0	0	0	0	0
21_G	41,890	8,085	72,839	38,177	662,798	8,803	77,191	9,379
21_D	381	73	662	347	6,021	80	701	85
31_G	11,598	3,819	19,314	9,904	171,456	3,914	21,100	2,934
31_D	213	70	354	181	3,141	72	387	54
32_G	2,849	938	4,744	2,433	42,113	961	5,183	721
32_D	159	52	265	136	2,357	54	290	40
41_G	0	0	0	0	0	0	0	0
41_D	33	11	58	29	547	16	62	8
42_G	0	0	0	0	0	0	0	0
42_D	51	19	81	41	790	27	93	14
43_G	1	0	2	1	15	0	2	0
43_D	90	36	134	69	1,319	49	160	27
51_G	102	23	167	82	1,457	25	185	30
51_D	97	41	158	77	1,382	45	176	28
52_G	1,194	302	1,902	937	16,401	331	2,138	349
52_D	1,133	540	1,806	890	15,572	591	2,030	332
53_G	177	11	282	139	2,430	12	317	52
53_D	168	19	268	132	2,307	21	301	49
54_G	0	0	0	0	0	0	0	0
54_D	0	0	0	0	0	0	0	0
61_G	81	83	115	51	922	41	136	32
61_D	932	828	1,316	585	10,598	411	1,562	371
62_G	0	0	0	0	0	0	0	0
62_D	948	894	1,249	559	9,593	445	1,544	393

2020 24-Hour Weekday ONI Hour Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	0	0	0	0	0	0	0	0
21_G	44,189	8,963	83,773	38,535	688,163	11,193	82,243	10,150
21_D	401	81	761	350	6,252	102	747	92
31_G	12,220	4,239	22,230	9,997	178,104	4,974	22,476	3,178
31_D	224	78	407	183	3,263	91	412	58
32_G	3,002	1,041	5,460	2,455	43,746	1,222	5,521	781
32_D	168	58	306	137	2,448	68	309	44
41_G	0	0	0	0	0	0	0	0
41_D	35	12	67	30	568	20	67	9
42_G	0	0	0	0	0	0	0	0
42_D	53	21	93	42	821	34	98	15
43_G	1	0	2	1	15	1	2	0
43_D	94	40	153	70	1,370	62	169	29
51_G	107	26	192	82	1,515	32	198	32
51_D	102	46	182	78	1,437	57	187	30
52_G	1,255	338	2,195	945	17,045	422	2,277	378
52_D	1,192	604	2,084	897	16,184	753	2,162	359
53_G	186	12	325	140	2,525	15	337	56
53_D	177	21	309	133	2,398	27	320	53
54_G	0	0	0	0	0	0	0	0
54_D	0	0	0	0	0	0	0	0
61_G	85	90	132	51	959	52	144	35
61_D	977	902	1,520	590	11,024	521	1,656	398
62_G	0	0	0	0	0	0	0	0
62_D	993	974	1,439	564	9,973	564	1,632	421

2023 24-Hour Weekday ONI Hour Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	0	0	0	0	0	0	0	0
21_G	47,306	9,397	92,742	40,027	723,903	11,511	88,331	11,212
21_D	526	105	1,031	445	8,051	128	982	125
31_G	13,226	4,449	24,753	10,395	187,711	5,143	24,176	3,506
31_D	256	86	479	201	3,635	100	468	68
32_G	3,252	1,094	6,086	2,556	46,153	1,265	5,944	862
32_D	182	61	341	143	2,583	71	333	48
41_G	0	0	0	0	0	0	0	0
41_D	37	13	74	31	600	21	72	10
42_G	0	0	0	0	0	0	0	0
42_D	56	23	105	44	878	35	107	17
43_G	1	0	2	1	16	1	2	0
43_D	98	42	172	72	1,448	65	182	32
51_G	117	27	215	86	1,600	34	213	35
51_D	111	48	204	81	1,517	60	201	34
52_G	1,371	355	2,457	984	18,038	442	2,454	418
52_D	1,302	634	2,333	935	17,128	790	2,330	397
53_G	203	13	364	146	2,673	16	364	62
53_D	193	22	345	138	2,536	28	345	59
54_G	0	0	0	0	0	0	0	0
54_D	0	0	0	0	0	0	0	0
61_G	88	99	155	55	1,049	60	160	40
61_D	1,011	989	1,781	634	12,082	594	1,843	462
62_G	0	0	0	0	0	0	0	0
62_D	976	1,020	1,621	579	10,444	614	1,734	467

2026 24-Hour Weekday ONI Hour Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	0	0	0	0	0	0	0	0
21_G	50,808	9,542	101,002	41,432	757,206	11,896	94,054	11,883
21_D	565	106	1,123	461	8,421	132	1,046	132
31_G	14,215	4,518	27,067	10,761	196,484	5,319	25,731	3,722
31_D	275	88	524	208	3,805	103	498	72
32_G	3,495	1,111	6,655	2,646	48,310	1,308	6,327	915
32_D	196	62	372	148	2,703	73	354	51
41_G	0	0	0	0	0	0	0	0
41_D	40	13	81	32	628	22	76	10
42_G	0	0	0	0	0	0	0	0
42_D	60	23	114	45	918	37	113	18
43_G	1	0	2	1	17	1	2	0
43_D	104	42	186	75	1,511	67	192	34
51_G	126	28	236	89	1,678	35	227	38
51_D	119	49	224	84	1,592	62	215	36
52_G	1,472	361	2,696	1,018	18,912	458	2,614	443
52_D	1,398	644	2,559	967	17,958	817	2,482	421
53_G	218	13	399	151	2,803	16	387	66
53_D	207	23	379	143	2,659	29	367	62
54_G	0	0	0	0	0	0	0	0
54_D	0	0	0	0	0	0	0	0
61_G	94	100	170	57	1,101	61	169	42
61_D	1,087	1,000	1,952	656	12,677	612	1,950	483
62_G	0	0	0	0	0	0	0	0
62_D	1,049	1,030	1,774	600	10,928	632	1,826	487

2027 24-Hour Weekday ONI Hour Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	0	0	0	0	0	0	0	0
21_G	51,607	9,566	103,623	41,776	769,204	12,003	96,124	12,166
21_D	574	106	1,152	465	8,555	133	1,069	135
31_G	14,447	4,530	27,820	10,847	199,645	5,367	26,306	3,814
31_D	280	88	539	210	3,867	104	509	74
32_G	3,552	1,114	6,840	2,667	49,087	1,320	6,468	938
32_D	199	62	383	149	2,747	74	362	52
41_G	0	0	0	0	0	0	0	0
41_D	41	13	83	32	639	22	78	10
42_G	0	0	0	0	0	0	0	0
42_D	61	23	117	45	932	37	116	19
43_G	1	0	2	1	17	1	2	0
43_D	106	42	191	75	1,534	67	196	34
51_G	128	28	243	89	1,707	35	232	38
51_D	121	49	230	85	1,619	62	220	36
52_G	1,497	362	2,775	1,026	19,228	462	2,674	454
52_D	1,421	646	2,635	974	18,258	825	2,539	431
53_G	222	13	411	152	2,850	16	396	67
53_D	210	23	390	144	2,704	29	376	64
54_G	0	0	0	0	0	0	0	0
54_D	0	0	0	0	0	0	0	0
61_G	96	100	175	57	1,120	62	173	43
61_D	1,108	1,002	2,012	661	12,893	617	1,992	491
62_G	0	0	0	0	0	0	0	0
62_D	1,069	1,032	1,828	604	11,101	637	1,863	496

2011 24-Hour Weekday Adjusted SHP Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	88,051	14,572	118,515	117,816	721,965	27,699	178,020	15,278
21_G	2,900,064	419,263	7,876,910	3,194,217	44,878,242	775,236	5,892,991	421,171
21_D	11,651	1,680	31,644	12,832	180,292	3,107	23,674	1,692
31_G	927,970	200,945	1,167,665	938,383	10,108,693	406,888	1,580,304	193,031
31_D	13,184	2,856	16,590	13,332	143,627	5,783	22,452	2,742
32_G	231,241	50,070	290,970	233,835	2,518,973	101,386	393,796	48,102
32_D	12,933	2,801	16,273	13,078	140,877	5,671	22,024	2,690
41_G	0	0	0	0	0	0	0	0
41_D	7,239	2,856	6,749	6,154	59,712	3,948	12,528	2,189
42_G	0	0	0	0	0	0	0	0
42_D	2,960	1,185	2,769	2,521	24,607	1,637	5,125	894
43_G	70	38	65	59	574	53	121	21
43_D	9,329	3,704	8,748	7,950	77,931	5,110	16,160	2,818
51_G	4,424	1,080	4,094	3,784	36,705	1,510	7,641	1,326
51_D	4,218	1,918	3,904	3,608	35,004	2,682	7,285	1,264
52_G	88,398	23,703	82,331	75,639	740,086	32,973	152,874	26,524
52_D	83,937	42,333	78,176	71,822	702,736	58,890	145,159	25,185
53_G	13,107	829	12,207	11,215	109,729	1,154	22,667	3,933
53_D	12,408	1,490	11,555	10,617	103,869	2,072	21,458	3,723
54_G	3,455	825	3,246	2,957	29,207	1,140	5,987	1,039
54_D	3,243	1,498	3,045	2,775	27,396	2,069	5,619	975
61_G	3,386	1,588	6,878	1,753	91,741	2,708	6,795	1,406
61_D	39,118	15,850	79,461	20,253	1,059,813	27,024	78,504	16,239
62_G	0	0	0	0	0	0	0	0
62_D	142,227	58,855	288,276	74,084	3,834,786	99,323	285,496	58,991

2017 24-Hour Weekday Adjusted SHP Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	125,599	15,820	153,197	146,726	841,637	29,453	221,578	18,403
21_G	4,138,408	463,710	10,145,358	3,981,600	52,587,465	824,952	7,315,353	508,390
21_D	29,168	3,272	71,504	28,062	370,631	5,820	51,558	3,583
31_G	1,332,835	224,317	1,517,266	1,175,495	11,916,797	436,048	1,980,011	234,935
31_D	21,706	3,415	24,711	19,144	194,083	6,639	32,247	3,826
32_G	327,082	54,992	372,343	288,471	2,924,430	106,899	485,902	57,654
32_D	17,969	3,015	20,456	15,847	160,662	5,861	26,694	3,167
41_G	0	0	0	0	0	0	0	0
41_D	3,309	1,009	2,790	2,456	22,492	1,343	4,989	844
42_G	0	0	0	0	0	0	0	0
42_D	6,531	1,998	5,525	4,854	44,590	2,663	9,854	1,665
43_G	201	63	171	150	1,380	85	304	51
43_D	18,032	5,527	15,298	13,414	123,649	7,368	27,225	4,597
51_G	6,548	1,218	5,506	4,878	44,505	1,642	9,874	1,661
51_D	6,251	2,167	5,258	4,658	42,507	2,922	9,427	1,585
52_G	126,235	26,078	106,790	94,150	865,109	35,100	190,616	32,043
52_D	119,843	46,579	101,382	89,382	821,299	62,693	180,964	30,421
53_G	18,675	916	15,798	13,928	127,977	1,232	28,199	4,740
53_D	17,778	1,644	15,040	13,259	121,843	2,213	26,845	4,513
54_G	5,243	969	4,468	3,913	36,281	1,301	7,930	1,333
54_D	4,940	1,749	4,209	3,687	34,183	2,348	7,471	1,256
61_G	4,842	1,661	8,935	2,192	107,055	2,888	8,504	1,684
61_D	55,942	16,580	103,220	25,322	1,236,733	28,826	98,241	19,453
62_G	0	0	0	0	0	0	0	0
62_D	203,273	62,103	374,060	92,541	4,473,437	105,870	356,835	70,755

2018 24-Hour Weekday Adjusted SHP Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	129,580	16,007	162,865	148,980	865,916	30,068	230,539	18,834
21_G	4,273,628	471,906	10,777,665	4,051,259	54,247,842	842,679	7,606,026	523,959
21_D	38,841	4,287	97,953	36,820	493,036	7,655	69,128	4,762
31_G	1,376,747	227,905	1,614,061	1,195,070	12,295,608	444,911	2,060,526	241,509
31_D	25,218	4,181	29,565	21,890	225,219	8,162	37,743	4,424
32_G	338,180	55,981	396,474	293,554	3,020,266	109,284	506,142	59,324
32_D	18,894	3,136	22,151	16,401	168,737	6,121	28,278	3,314
41_G	0	0	0	0	0	0	0	0
41_D	3,413	1,019	2,965	2,498	23,177	1,370	5,190	864
42_G	0	0	0	0	0	0	0	0
42_D	6,734	2,041	5,868	4,934	45,895	2,744	10,248	1,702
43_G	208	64	181	152	1,421	86	316	53
43_D	18,597	5,563	16,254	13,635	127,292	7,484	28,323	4,701
51_G	6,567	1,216	5,688	4,818	44,631	1,651	9,985	1,652
51_D	6,260	2,159	5,424	4,593	42,555	2,932	9,519	1,575
52_G	130,939	26,540	114,116	96,153	896,896	35,997	199,381	32,967
52_D	124,330	47,401	108,357	91,301	851,630	64,290	189,318	31,304
53_G	19,414	929	16,920	14,256	132,983	1,260	29,562	4,888
53_D	18,380	1,668	16,017	13,497	125,888	2,262	27,987	4,628
54_G	5,107	918	4,485	3,753	35,308	1,243	7,789	1,288
54_D	4,793	1,666	4,208	3,522	33,124	2,254	7,310	1,209
61_G	4,974	1,649	9,452	2,225	109,860	2,937	8,812	1,712
61_D	57,505	16,456	109,268	25,724	1,269,986	29,321	101,878	19,791
62_G	0	0	0	0	0	0	0	0
62_D	183,653	54,369	348,077	82,550	4,035,691	94,621	325,215	63,300

2020 24-Hour Weekday Adjusted SHP Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	135,836	17,555	186,541	150,182	896,262	38,023	244,335	20,307
21_G	4,478,562	516,995	12,341,067	4,083,897	56,136,308	1,065,221	8,057,974	564,647
21_D	40,704	4,696	112,162	37,117	510,200	9,676	73,235	5,132
31_G	1,442,892	249,667	1,847,739	1,204,697	12,722,893	562,455	2,183,006	260,301
31_D	26,430	4,580	33,845	22,067	233,046	10,318	39,986	4,768
32_G	354,428	61,326	453,874	295,919	3,125,223	138,157	536,228	63,940
32_D	19,802	3,435	25,358	16,533	174,601	7,739	29,959	3,572
41_G	0	0	0	0	0	0	0	0
41_D	3,577	1,117	3,394	2,518	23,983	1,732	5,499	931
42_G	0	0	0	0	0	0	0	0
42_D	7,058	2,236	6,719	4,974	47,492	3,470	10,859	1,835
43_G	218	70	208	153	1,470	109	335	57
43_D	19,493	6,098	18,611	13,745	131,725	9,463	30,013	5,068
51_G	6,883	1,332	6,511	4,857	46,180	2,088	10,579	1,781
51_D	6,561	2,365	6,208	4,630	44,032	3,707	10,086	1,698
52_G	137,246	29,087	130,645	96,930	928,094	45,511	211,269	35,540
52_D	130,320	51,949	124,051	92,037	881,254	81,283	200,606	33,746
53_G	20,349	1,018	19,371	14,371	137,609	1,593	31,325	5,270
53_D	19,265	1,828	18,337	13,606	130,267	2,860	29,655	4,989
54_G	5,353	1,006	5,135	3,783	36,539	1,571	8,254	1,388
54_D	5,024	1,826	4,818	3,550	34,279	2,851	7,746	1,303
61_G	5,214	1,809	10,822	2,243	113,696	3,714	9,339	1,846
61_D	60,281	18,062	125,110	25,933	1,314,325	37,074	107,969	21,345
62_G	0	0	0	0	0	0	0	0
62_D	192,517	59,663	398,576	83,219	4,176,719	119,645	344,665	68,266

2023 24-Hour Weekday Adjusted SHP Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	142,140	18,499	207,428	156,187	943,663	39,983	262,634	22,148
21_G	4,670,968	543,852	13,698,424	4,238,846	58,982,205	1,118,802	8,644,035	613,933
21_D	51,953	6,048	152,360	47,147	656,028	12,442	96,143	6,828
31_G	1,506,075	262,899	2,052,823	1,251,624	13,380,224	591,166	2,344,035	283,437
31_D	29,163	5,093	39,750	24,236	259,091	11,453	45,389	5,488
32_G	370,328	64,642	504,769	307,762	3,290,068	145,356	576,375	69,694
32_D	20,690	3,621	28,201	17,195	183,810	8,142	32,202	3,894
41_G	0	0	0	0	0	0	0	0
41_D	3,741	1,177	3,775	2,619	25,248	1,822	5,911	1,015
42_G	0	0	0	0	0	0	0	0
42_D	7,498	2,357	7,590	5,254	50,779	3,650	11,854	2,032
43_G	228	74	231	160	1,548	115	360	62
43_D	20,277	6,403	20,580	14,214	137,874	9,917	32,077	5,495
51_G	7,192	1,404	7,239	5,052	48,613	2,195	11,372	1,941
51_D	6,857	2,493	6,903	4,816	46,352	3,899	10,841	1,851
52_G	143,800	30,730	145,604	101,048	979,360	47,977	227,631	38,842
52_D	136,560	54,875	138,273	95,961	930,051	85,674	216,170	36,887
53_G	21,269	1,073	21,535	14,946	144,847	1,675	33,668	5,745
53_D	20,253	1,926	20,508	14,232	137,940	3,008	32,060	5,471
54_G	5,255	1,012	5,361	3,694	36,120	1,576	8,330	1,421
54_D	4,911	1,801	5,008	3,451	33,735	2,806	7,783	1,328
61_G	5,458	1,895	12,007	2,326	119,548	3,891	10,019	2,006
61_D	63,112	18,916	138,848	26,905	1,382,348	38,846	115,861	23,198
62_G	0	0	0	0	0	0	0	0
62_D	192,327	59,724	422,314	82,440	4,193,159	119,739	353,091	70,859

2026 24-Hour Weekday Adjusted SHP Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	151,532	18,739	225,298	161,463	983,653	41,246	277,721	23,369
21_G	4,977,903	550,812	14,876,044	4,381,883	61,458,546	1,154,001	9,135,272	647,426
21_D	55,367	6,125	165,458	48,738	683,571	12,833	101,607	7,201
31_G	1,605,059	266,264	2,228,489	1,293,861	13,940,735	609,762	2,477,344	298,930
31_D	31,080	5,158	43,152	25,054	269,945	11,813	47,971	5,788
32_G	394,668	65,469	547,963	318,147	3,427,893	149,928	609,154	73,504
32_D	22,050	3,667	30,614	17,775	191,510	8,398	34,033	4,106
41_G	0	0	0	0	0	0	0	0
41_D	3,987	1,192	4,099	2,707	26,307	1,879	6,248	1,071
42_G	0	0	0	0	0	0	0	0
42_D	7,992	2,387	8,241	5,431	52,912	3,765	12,532	2,144
43_G	243	75	251	165	1,613	119	381	65
43_D	21,614	6,485	22,347	14,695	143,673	10,229	33,912	5,798
51_G	7,665	1,422	7,857	5,222	50,647	2,265	12,020	2,048
51_D	7,308	2,525	7,492	4,978	48,291	4,021	11,460	1,952
52_G	153,270	31,126	158,056	104,462	1,020,452	49,489	240,633	40,979
52_D	145,553	55,583	150,098	99,202	969,074	88,373	228,518	38,915
53_G	22,670	1,087	23,377	15,451	150,924	1,728	35,591	6,061
53_D	21,587	1,951	22,262	14,712	143,728	3,103	33,891	5,772
54_G	5,602	1,025	5,821	3,819	37,640	1,626	8,806	1,500
54_D	5,235	1,825	5,437	3,568	35,155	2,894	8,228	1,401
61_G	5,816	1,920	13,036	2,405	124,590	4,014	10,593	2,118
61_D	67,253	19,171	150,749	27,814	1,440,649	40,075	122,501	24,492
62_G	0	0	0	0	0	0	0	0
62_D	204,968	60,522	458,554	85,224	4,370,217	123,526	373,338	74,801

2027 24-Hour Weekday Adjusted SHP Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	153,742	18,781	230,961	162,662	997,781	41,575	283,406	23,890
21_G	5,050,178	552,028	15,249,255	4,414,183	62,331,485	1,163,150	9,320,861	661,740
21_D	56,171	6,139	169,609	49,097	693,281	12,935	103,671	7,360
31_G	1,628,338	266,851	2,284,069	1,303,420	14,138,260	614,598	2,527,647	305,544
31_D	31,531	5,170	44,228	25,239	273,770	11,907	48,945	5,916
32_G	400,392	65,613	561,630	320,498	3,476,462	151,117	621,523	75,130
32_D	22,370	3,675	31,378	17,906	194,224	8,465	34,724	4,197
41_G	0	0	0	0	0	0	0	0
41_D	4,045	1,195	4,201	2,727	26,680	1,894	6,375	1,095
42_G	0	0	0	0	0	0	0	0
42_D	8,109	2,392	8,447	5,471	53,664	3,795	12,787	2,192
43_G	246	75	257	166	1,636	120	389	67
43_D	21,929	6,500	22,907	14,803	145,717	10,311	34,604	5,927
51_G	7,776	1,425	8,052	5,261	51,364	2,283	12,265	2,093
51_D	7,414	2,531	7,678	5,015	48,975	4,053	11,693	1,996
52_G	155,495	31,195	161,990	105,235	1,034,942	49,882	245,533	41,890
52_D	147,666	55,707	153,835	99,937	982,835	89,075	233,171	39,781
53_G	22,999	1,089	23,959	15,565	153,067	1,741	36,316	6,196
53_D	21,900	1,956	22,816	14,821	145,769	3,127	34,582	5,900
54_G	5,683	1,027	5,966	3,847	38,176	1,638	8,986	1,533
54_D	5,311	1,829	5,573	3,595	35,655	2,917	8,396	1,432
61_G	5,899	1,925	13,361	2,423	126,370	4,046	10,809	2,165
61_D	68,220	19,214	154,505	28,020	1,461,224	40,396	124,998	25,044
62_G	0	0	0	0	0	0	0	0
62_D	207,923	60,658	470,003	85,857	4,432,720	124,513	380,956	76,483

2011 24-Hour Weekday Starts Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	638	106	859	853	5,241	201	1,289	111
21_G	511,960	77,697	1,367,285	564,525	8,090,682	137,034	1,038,075	77,294
21_D	2,069	315	5,577	2,247	32,928	557	4,201	306
31_G	172,516	39,426	220,364	174,329	1,943,228	75,630	295,958	36,646
31_D	2,352	537	3,003	2,377	26,527	1,032	4,022	500
32_G	45,652	10,434	58,315	46,134	514,201	20,012	78,318	9,694
32_D	2,485	566	3,173	2,510	28,032	1,091	4,258	530
41_G	0	0	0	0	0	0	0	0
41_D	2,165	869	2,068	1,855	18,752	1,184	3,765	653
42_G	0	0	0	0	0	0	0	0
42_D	986	401	943	845	8,545	547	1,716	298
43_G	9	5	9	8	82	7	17	3
43_D	1,762	710	1,683	1,510	15,261	968	3,064	532
51_G	244	61	233	209	2,114	83	424	74
51_D	350	163	334	300	3,029	222	608	105
52_G	78,055	21,326	74,584	66,890	676,174	29,070	135,766	23,549
52_D	81,087	41,671	77,482	69,489	702,446	56,804	141,041	24,464
53_G	766	49	732	656	6,634	67	1,332	231
53_D	804	98	769	689	6,968	134	1,399	243
54_G	74	18	71	64	644	25	129	22
54_D	77	36	74	66	668	49	134	23
61_G	739	360	1,487	393	19,597	587	1,485	306
61_D	11,282	4,747	22,697	5,998	299,195	7,740	22,665	4,666
62_G	0	0	0	0	0	0	0	0
62_D	3,430	1,461	6,900	1,823	90,958	2,382	6,890	1,418

2017 24-Hour Weekday Starts Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	909	115	1,110	1,062	6,106	213	1,605	133
21_G	727,658	84,019	1,761,465	700,470	9,394,221	145,175	1,287,740	92,744
21_D	5,435	622	13,050	5,242	70,442	1,108	9,467	707
31_G	246,327	42,867	285,149	217,326	2,266,704	80,589	368,683	44,189
31_D	3,918	639	4,545	3,458	36,071	1,196	5,892	701
32_G	64,443	11,203	74,591	56,852	592,966	21,063	96,466	11,560
32_D	3,242	561	3,753	2,860	29,933	1,062	4,843	585
41_G	0	0	0	0	0	0	0	0
41_D	988	302	856	739	6,993	403	1,500	252
42_G	0	0	0	0	0	0	0	0
42_D	2,175	667	1,884	1,627	15,393	891	3,302	554
43_G	31	10	27	23	221	13	47	8
43_D	3,356	1,031	2,906	2,511	23,747	1,377	5,093	855
51_G	254	48	220	190	1,799	64	386	65
51_D	515	180	446	385	3,644	241	782	131
52_G	122,387	25,458	105,989	91,571	866,113	34,004	185,766	31,180
52_D	109,117	42,702	94,497	81,642	772,203	57,037	165,624	27,799
53_G	1,218	60	1,055	912	8,623	80	1,849	310
53_D	1,076	100	931	805	7,612	134	1,633	274
54_G	113	21	98	85	800	28	172	29
54_D	114	41	99	86	809	54	174	29
61_G	1,262	468	2,302	586	27,348	747	2,213	441
61_D	15,792	5,055	28,795	7,331	342,137	8,077	27,686	5,515
62_G	0	0	0	0	0	0	0	0
62_D	4,892	1,585	8,920	2,271	105,981	2,533	8,576	1,708

2018 24-Hour Weekday Starts Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	938	116	1,180	1,078	6,281	218	1,669	136
21_G	749,263	84,844	1,869,016	709,846	9,644,453	147,924	1,337,248	94,718
21_D	7,099	795	17,559	6,737	91,787	1,427	12,498	918
31_G	253,507	43,215	302,397	220,115	2,325,954	81,983	382,645	45,108
31_D	4,598	788	5,499	3,995	42,166	1,485	6,985	815
32_G	66,410	11,319	79,205	57,656	609,282	21,478	100,246	11,817
32_D	3,390	579	4,047	2,945	31,195	1,102	5,120	606
41_G	0	0	0	0	0	0	0	0
41_D	1,020	305	910	751	7,198	411	1,562	258
42_G	0	0	0	0	0	0	0	0
42_D	2,245	682	2,004	1,653	15,843	919	3,437	567
43_G	33	10	29	24	230	14	50	8
43_D	3,462	1,038	3,089	2,549	24,424	1,399	5,299	875
51_G	236	44	211	174	1,666	59	361	60
51_D	514	179	459	379	3,628	241	787	130
52_G	128,062	26,106	114,281	94,298	903,592	35,185	196,038	32,359
52_D	112,127	42,994	100,061	82,565	791,156	57,946	171,644	28,333
53_G	1,279	62	1,142	942	9,026	83	1,958	323
53_D	1,100	100	982	810	7,765	135	1,685	278
54_G	110	20	98	81	776	27	168	28
54_D	110	38	98	81	778	52	169	28
61_G	1,331	484	2,500	608	28,741	780	2,353	461
61_D	16,258	5,103	30,547	7,427	351,180	8,228	28,745	5,631
62_G	0	0	0	0	0	0	0	0
62_D	4,432	1,408	8,327	2,025	95,733	2,270	7,836	1,535

2020 24-Hour Weekday Starts Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	984	127	1,351	1,087	6,501	275	1,769	147
21_G	785,657	93,070	2,141,336	715,769	9,985,252	187,113	1,417,557	102,157
21_D	7,205	846	19,494	6,569	92,035	1,745	12,925	956
31_G	265,417	47,330	345,925	221,612	2,404,542	103,553	405,006	48,583
31_D	4,992	896	6,521	4,171	45,174	1,941	7,672	906
32_G	69,556	12,400	90,634	58,069	630,125	27,144	106,135	12,735
32_D	3,602	647	4,710	3,011	32,664	1,405	5,523	656
41_G	0	0	0	0	0	0	0	0
41_D	1,069	335	1,043	757	7,450	520	1,655	278
42_G	0	0	0	0	0	0	0	0
42_D	2,354	748	2,295	1,667	16,399	1,162	3,643	612
43_G	36	12	35	25	249	18	55	9
43_D	3,624	1,137	3,533	2,566	25,245	1,767	5,608	942
51_G	201	39	196	142	1,400	61	311	52
51_D	538	196	525	381	3,750	304	833	140
52_G	135,532	28,905	132,151	95,969	944,228	44,921	209,761	35,225
52_D	116,023	46,542	113,129	82,155	808,313	72,331	179,568	30,154
53_G	1,356	68	1,322	960	9,446	106	2,098	352
53_D	1,136	108	1,108	804	7,915	169	1,758	295
54_G	116	22	113	82	806	34	179	30
54_D	114	42	112	81	797	65	177	30
61_G	1,450	551	2,976	637	30,916	1,025	2,591	516
61_D	16,981	5,576	34,861	7,460	362,166	10,367	30,355	6,050
62_G	0	0	0	0	0	0	0	0
62_D	4,646	1,544	9,538	2,041	99,089	2,871	8,305	1,655

2023 24-Hour Weekday Starts Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	1,029	134	1,503	1,131	6,845	289	1,902	160
21_G	820,584	97,880	2,376,485	742,963	10,493,589	196,390	1,520,708	111,217
21_D	9,074	1,083	26,140	8,233	116,185	2,191	16,885	1,242
31_G	276,927	49,732	383,541	229,799	2,524,360	108,574	434,102	52,837
31_D	5,740	1,031	7,944	4,760	52,307	2,248	9,016	1,089
32_G	72,639	13,040	100,570	60,267	662,157	28,492	113,856	13,868
32_D	3,897	707	5,429	3,243	35,480	1,517	6,139	733
41_G	0	0	0	0	0	0	0	0
41_D	1,119	353	1,159	787	7,844	547	1,779	303
42_G	0	0	0	0	0	0	0	0
42_D	2,501	788	2,591	1,760	17,532	1,222	3,976	678
43_G	37	12	39	26	263	19	60	10
43_D	3,769	1,193	3,905	2,652	26,421	1,850	5,992	1,021
51_G	166	33	172	117	1,165	51	264	45
51_D	560	205	581	394	3,928	318	891	152
52_G	142,314	30,564	147,450	100,149	997,583	47,399	226,245	38,551
52_D	120,853	48,805	125,215	85,047	847,148	75,689	192,127	32,738
53_G	1,418	72	1,470	998	9,943	112	2,255	384
53_D	1,187	114	1,230	835	8,321	176	1,887	322
54_G	114	22	118	80	800	34	181	31
54_D	111	41	115	78	777	63	176	30
61_G	1,548	593	3,378	676	33,226	1,100	2,843	575
61_D	17,736	5,865	38,690	7,743	380,599	10,880	32,566	6,586
62_G	0	0	0	0	0	0	0	0
62_D	4,640	1,553	10,121	2,026	99,565	2,881	8,519	1,723

2026 24-Hour Weekday Starts Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	1,097	136	1,632	1,169	7,135	299	2,011	169
21_G	874,658	99,136	2,580,744	767,926	10,936,754	202,567	1,607,753	117,336
21_D	9,876	1,122	29,092	8,689	123,413	2,292	18,272	1,328
31_G	294,813	50,319	416,056	237,241	2,627,571	111,823	458,464	55,658
31_D	6,247	1,061	8,773	5,014	55,774	2,386	9,698	1,185
32_G	77,259	13,181	108,990	62,159	688,582	29,321	120,129	14,598
32_D	4,314	742	6,117	3,479	38,424	1,624	6,728	802
41_G	0	0	0	0	0	0	0	0
41_D	1,193	357	1,259	814	8,177	564	1,881	320
42_G	0	0	0	0	0	0	0	0
42_D	2,666	798	2,815	1,820	18,275	1,261	4,205	715
43_G	42	13	44	28	285	20	66	11
43_D	4,015	1,207	4,238	2,740	27,520	1,907	6,331	1,076
51_G	107	20	113	73	733	32	169	29
51_D	596	207	629	407	4,084	327	940	160
52_G	149,803	30,571	158,132	102,225	1,026,748	48,279	236,225	40,164
52_D	129,861	49,833	137,081	88,617	890,065	78,699	204,778	34,817
53_G	1,491	72	1,574	1,018	10,220	113	2,351	400
53_D	1,277	116	1,348	871	8,752	183	2,014	342
54_G	122	22	129	83	838	35	193	33
54_D	117	41	124	80	803	65	185	31
61_G	1,645	599	3,656	696	34,519	1,131	2,996	605
61_D	18,913	5,943	42,036	8,007	396,857	11,227	34,448	6,951
62_G	0	0	0	0	0	0	0	0
62_D	4,946	1,573	10,993	2,094	103,786	2,972	9,009	1,818

2027 24-Hour Weekday Starts Summaries by County FIPS.

SUT/FT	48039	48071	48157	48167	48201	48291	48339	48473
11_G	1,113	136	1,673	1,177	7,237	301	2,052	173
21_G	887,286	99,343	2,645,237	773,513	11,092,383	204,160	1,640,418	119,938
21_D	10,153	1,139	30,218	8,865	126,801	2,336	18,883	1,373
31_G	299,038	50,422	426,437	238,950	2,664,632	112,677	467,761	56,875
31_D	6,350	1,064	8,998	5,058	56,691	2,416	9,905	1,219
32_G	78,334	13,202	111,667	62,582	698,011	29,534	122,516	14,911
32_D	4,423	751	6,327	3,540	39,403	1,657	6,931	831
41_G	0	0	0	0	0	0	0	0
41_D	1,210	358	1,291	820	8,294	569	1,920	327
42_G	0	0	0	0	0	0	0	0
42_D	2,705	800	2,885	1,833	18,538	1,271	4,291	731
43_G	43	13	45	29	291	21	67	11
43_D	4,073	1,210	4,344	2,760	27,911	1,922	6,460	1,100
51_G	84	15	89	57	573	24	133	23
51_D	604	207	644	409	4,140	329	958	163
52_G	151,033	30,447	161,089	102,337	1,034,960	48,359	239,546	40,801
52_D	132,426	50,199	141,244	89,729	907,458	79,731	210,035	35,775
53_G	1,502	71	1,602	1,018	10,291	114	2,382	406
53_D	1,303	117	1,390	883	8,931	186	2,067	352
54_G	124	23	133	84	853	36	197	34
54_D	118	41	126	80	810	65	188	32
61_G	1,667	599	3,744	701	34,974	1,139	3,054	617
61_D	19,191	5,957	43,098	8,068	402,606	11,318	35,157	7,107
62_G	0	0	0	0	0	0	0	0
62_D	5,018	1,577	11,270	2,110	105,278	2,996	9,193	1,858

2011 Weekday Hotelling Hours Summaries by Operating Mode.

County FIPS	Hotelling Hours	SHEI	APU Hours	Other Mode Hours
48039	935	736	13	187
48071	2,710	2,131	37	542
48157	5,087	4,000	69	1,017
48167	432	340	6	86
48201	44,814	35,242	610	8,963
48291	1,344	1,057	18	269
48339	5,931	4,664	81	1,186
48473	3,252	2,558	44	650

2017 Weekday Hotelling Hours Summaries by Operating Mode.

County FIPS	Hotelling Hours	SHEI	APU Hours	Other Mode Hours
48039	1,299	977	62	260
48071	4,032	3,032	193	806
48157	4,665	3,508	224	933
48167	479	360	23	96
48201	47,668	35,847	2,288	9,534
48291	1,464	1,101	70	293
48339	6,844	5,147	328	1,369
48473	4,360	3,279	209	872

2018 Weekday Hotelling Hours Summaries by Operating Mode.

County FIPS	Hotelling Hours	SHEI	APU Hours	Other Mode Hours
48039	1,352	1,013	68	270
48071	4,266	3,197	215	853
48157	4,898	3,671	247	980
48167	478	358	24	96
48201	48,201	36,131	2,429	9,640
48291	1,533	1,149	77	307
48339	7,011	5,255	353	1,402
48473	4,605	3,452	232	921

2020 Weekday Hotelling Hours Summaries by Operating Mode.

County FIPS	Hotelling Hours	SHEI	APU Hours	Other Mode Hours
48039	1,449	1,081	78	290
48071	4,762	3,554	256	952
48157	5,967	4,453	320	1,193
48167	492	367	26	98
48201	51,953	38,773	2,789	10,391
48291	1,972	1,472	106	394
48339	7,462	5,569	401	1,492
48473	4,991	3,725	268	998

2023 Weekday Hotelling Hours Summaries by Operating Mode.

County FIPS	Hotelling Hours	SHEI	APU Hours	Other Mode Hours
48039	1,346	903	145	298
48071	4,993	3,351	537	1,105
48157	6,672	4,478	717	1,477
48167	505	339	54	112
48201	54,253	36,410	5,834	12,009
48291	2,175	1,460	234	482
48339	7,922	5,317	852	1,754
48473	5,404	3,627	581	1,196

2026 Weekday Hotelling Hours Summaries by Operating Mode.

County FIPS	Hotelling Hours	SHEI	APU Hours	Other Mode Hours
48039	1,433	828	256	349
48071	5,037	2,911	901	1,225
48157	7,252	4,192	1,297	1,764
48167	522	302	93	127
48201	56,608	32,718	10,124	13,766
48291	2,234	1,291	400	543
48339	8,302	4,799	1,485	2,019
48473	5,615	3,245	1,004	1,365

2027 Weekday Hotelling Hours Summaries by Operating Mode.

County FIPS	Hotelling Hours	SHEI	APU Hours	Other Mode Hours
48039	1,458	798	291	369
48071	5,047	2,763	1,006	1,278
48157	7,450	4,078	1,485	1,887
48167	525	287	105	133
48201	57,444	31,445	11,450	14,549
48291	2,248	1,231	448	569
48339	8,459	4,630	1,686	2,142
48473	5,705	3,123	1,137	1,445

APPENDIX G:
SOURCE TYPE AGE AND FUEL ENGINE FRACTIONS INPUTS TO MOVES

Brazoria County 2011 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.061795	0.061189	0.051236	0.051236	0.036180	0.074697	0.043899	0.020412	0.107326	0.108951	0.017572	0.054796	0.068825
1	0.060500	0.084498	0.069065	0.069065	0.039841	0.101513	0.042214	0.015110	0.098838	0.103650	0.002979	0.056698	0.059543
2	0.060130	0.085123	0.057148	0.057148	0.046623	0.104812	0.055843	0.028331	0.113632	0.111268	0.005313	0.044354	0.047903
3	0.053284	0.080094	0.054475	0.054475	0.049281	0.102921	0.059585	0.025227	0.089706	0.085755	0.020619	0.053668	0.060675
4	0.055134	0.089629	0.059136	0.059136	0.052966	0.076456	0.054774	0.076490	0.101333	0.102451	0.035762	0.064806	0.071965
5	0.056429	0.074963	0.058544	0.058544	0.068397	0.072053	0.055227	0.064970	0.056427	0.056032	0.048854	0.056252	0.057263
6	0.046994	0.069592	0.049366	0.049366	0.042648	0.057371	0.050452	0.056933	0.053431	0.050813	0.038874	0.057525	0.058116
7	0.045328	0.057499	0.039964	0.039964	0.042736	0.064267	0.058689	0.049088	0.069221	0.071436	0.060535	0.063625	0.060032
8	0.032562	0.047228	0.041399	0.041399	0.057372	0.070033	0.045203	0.055546	0.048059	0.048826	0.046135	0.032744	0.030871
9	0.028307	0.039774	0.034974	0.034974	0.054751	0.068493	0.055453	0.052116	0.017683	0.017043	0.044240	0.021855	0.019997
10	0.058464	0.031670	0.028719	0.028719	0.065557	0.068653	0.065744	0.057687	0.017940	0.016190	0.029414	0.028546	0.027428
11	0.053839	0.046170	0.046351	0.046351	0.078557	0.049889	0.060342	0.072218	0.044072	0.041381	0.055786	0.026198	0.024805
12	0.064755	0.043650	0.049287	0.049287	0.047578	0.034391	0.034339	0.060105	0.028590	0.027061	0.086656	0.087920	0.078722
13	0.061795	0.033678	0.045745	0.045745	0.039627	0.019471	0.033557	0.038712	0.030257	0.030204	0.039532	0.056383	0.050902
14	0.045143	0.030181	0.037120	0.037120	0.036599	0.009178	0.030650	0.026002	0.023951	0.025697	0.066825	0.048250	0.043087
15	0.037743	0.024954	0.039582	0.039582	0.029292	0.013218	0.027866	0.034289	0.018410	0.019228	0.035417	0.028953	0.024421
16	0.034598	0.020635	0.037778	0.037778	0.030064	0.002472	0.031547	0.039908	0.014718	0.015792	0.039586	0.022498	0.021618
17	0.036078	0.018056	0.039056	0.039056	0.023718	0.004862	0.016693	0.025686	0.013232	0.013489	0.041853	0.018760	0.016864
18	0.022202	0.014281	0.033604	0.033604	0.021178	0.000730	0.020301	0.020470	0.013138	0.013534	0.025183	0.025502	0.023545
19	0.014801	0.012135	0.026783	0.026783	0.013178	0.001112	0.018896	0.016540	0.010719	0.009828	0.024551	0.035354	0.032228
20	0.013136	0.008846	0.021819	0.021819	0.011799	0.000936	0.024538	0.021137	0.009528	0.009369	0.016394	0.027142	0.024374
21	0.008881	0.005942	0.013497	0.013497	0.017000	0.001181	0.026242	0.024395	0.003893	0.004506	0.025289	0.020163	0.018389
22	0.007586	0.004517	0.014353	0.014353	0.021289	0.000616	0.013673	0.017998	0.004563	0.004678	0.031470	0.013407	0.012671
23	0.007586	0.002589	0.010205	0.010205	0.013982	0.000249	0.014528	0.019271	0.002344	0.002323	0.028159	0.012108	0.012375
24	0.004255	0.002296	0.008783	0.008783	0.009457	0.000070	0.013551	0.017751	0.002225	0.002388	0.025783	0.012069	0.011774
25	0.004440	0.001692	0.007282	0.007282	0.007992	0.000024	0.010508	0.012854	0.001247	0.001414	0.015597	0.007491	0.008079
26	0.002960	0.001180	0.004596	0.004596	0.008237	0.000050	0.007903	0.012188	0.001003	0.001073	0.016256	0.005785	0.006273
27	0.001850	0.000913	0.003792	0.003792	0.006363	0.000037	0.006810	0.010137	0.000740	0.000713	0.015723	0.003739	0.003870
28	0.002220	0.000913	0.002713	0.002713	0.005349	0.000027	0.005974	0.008018	0.000677	0.000730	0.014339	0.002912	0.003640
29	0.001480	0.000657	0.002436	0.002436	0.004757	0.000020	0.004936	0.006995	0.000533	0.000653	0.014229	0.002335	0.003493
30	0.015726	0.005456	0.011193	0.011193	0.017635	0.000198	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Brazoria County 2017 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.061795	0.061189	0.051236	0.051236	0.078824	0.091142	0.083978	0.031614	0.107326	0.108951	0.016664	0.054796	0.068825
1	0.060500	0.084498	0.069065	0.069065	0.075667	0.090093	0.076580	0.032820	0.098838	0.103650	0.017093	0.056698	0.059543
2	0.060130	0.085123	0.057148	0.057148	0.067199	0.077034	0.075099	0.039904	0.113632	0.111268	0.017428	0.044354	0.047903
3	0.053284	0.080094	0.054475	0.054475	0.063959	0.079629	0.072132	0.035734	0.089706	0.085755	0.016351	0.053668	0.060675
4	0.055134	0.089629	0.059136	0.059136	0.041394	0.062045	0.040955	0.031878	0.101333	0.102451	0.020170	0.064806	0.071965
5	0.056429	0.074963	0.058544	0.058544	0.036596	0.068674	0.042028	0.032138	0.056427	0.056032	0.010539	0.056252	0.057263
6	0.046994	0.069592	0.049366	0.049366	0.032532	0.055132	0.043047	0.023869	0.053431	0.050813	0.019997	0.057525	0.058116
7	0.045328	0.057499	0.039964	0.039964	0.035230	0.072004	0.039560	0.017559	0.069221	0.071436	0.003389	0.063625	0.060032
8	0.032562	0.047228	0.041399	0.041399	0.039392	0.069145	0.049382	0.031958	0.048059	0.048826	0.005994	0.032744	0.030871
9	0.028307	0.039774	0.034974	0.034974	0.039680	0.062851	0.049899	0.027028	0.017683	0.017043	0.022758	0.021855	0.019997
10	0.058464	0.031670	0.028719	0.028719	0.041020	0.044016	0.043545	0.078002	0.017940	0.016190	0.038819	0.028546	0.027428
11	0.053839	0.046170	0.046351	0.046351	0.050566	0.038149	0.041402	0.063658	0.044072	0.041381	0.052497	0.026198	0.024805
12	0.064755	0.043650	0.049287	0.049287	0.030779	0.028742	0.036224	0.054189	0.028590	0.027061	0.041177	0.087920	0.078722
13	0.061795	0.033678	0.045745	0.045745	0.029860	0.029906	0.039417	0.045716	0.030257	0.030204	0.063961	0.056383	0.050902
14	0.045143	0.030181	0.037120	0.037120	0.038819	0.030838	0.029111	0.050432	0.023951	0.025697	0.048354	0.048250	0.043087
15	0.037743	0.024954	0.039582	0.039582	0.035967	0.028980	0.034482	0.045640	0.018410	0.019228	0.045680	0.028953	0.024421
16	0.034598	0.020635	0.037778	0.037778	0.041037	0.026572	0.038448	0.048454	0.014718	0.015792	0.030061	0.022498	0.021618
17	0.036078	0.018056	0.039056	0.039056	0.047968	0.018212	0.033726	0.058821	0.013232	0.013489	0.056177	0.018760	0.016864
18	0.022202	0.014281	0.033604	0.033604	0.028106	0.011607	0.017894	0.047873	0.013138	0.013534	0.087043	0.025502	0.023545
19	0.014801	0.012135	0.026783	0.026783	0.022635	0.006198	0.016732	0.030019	0.010719	0.009828	0.039384	0.035354	0.032228
20	0.013136	0.008846	0.021819	0.021819	0.020051	0.002680	0.014288	0.019410	0.009528	0.009369	0.065558	0.027142	0.024374
21	0.008881	0.005942	0.013497	0.013497	0.015338	0.003551	0.012169	0.024501	0.003893	0.004506	0.034386	0.020163	0.018389
22	0.007586	0.004517	0.014353	0.014353	0.015262	0.000636	0.013276	0.027421	0.004563	0.004678	0.037837	0.013407	0.012671
23	0.007586	0.002589	0.010205	0.010205	0.011438	0.001134	0.006577	0.016877	0.002344	0.002323	0.039588	0.012108	0.012375
24	0.004255	0.002296	0.008783	0.008783	0.009950	0.000160	0.007616	0.013002	0.002225	0.002388	0.023454	0.012069	0.011774
25	0.004440	0.001692	0.007282	0.007282	0.006052	0.000234	0.006794	0.010264	0.001247	0.001414	0.022808	0.007491	0.008079
26	0.002960	0.001180	0.004596	0.004596	0.005200	0.000182	0.008420	0.012742	0.001003	0.001073	0.015103	0.005785	0.006273
27	0.001850	0.000913	0.003792	0.003792	0.007295	0.000215	0.008562	0.014199	0.000740	0.000713	0.022934	0.003739	0.003870
28	0.002220	0.000913	0.002713	0.002713	0.008928	0.000108	0.004271	0.010231	0.000677	0.000730	0.028466	0.002912	0.003640
29	0.001480	0.000657	0.002436	0.002436	0.005620	0.000040	0.004325	0.010633	0.000533	0.000653	0.025257	0.002335	0.003493
30	0.015726	0.005456	0.011193	0.011193	0.017635	0.000091	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Brazoria County 2018 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.185384	0.183566	0.153707	0.153707	0.170292	0.170292	0.170292	0.178322	0.321977	0.326853	0.178322	0.164388	0.206475
1	0.181499	0.253494	0.207195	0.207195	0.234982	0.271088	0.250293	0.094206	0.296515	0.310950	0.050348	0.170095	0.178630
2	0.180389	0.255368	0.171444	0.171444	0.225573	0.267969	0.228243	0.097801	0.340895	0.333805	0.051643	0.133061	0.143708
3	0.159852	0.240281	0.163425	0.163425	0.200328	0.229125	0.223827	0.118909	0.269117	0.257264	0.052654	0.161004	0.182026
4	0.165402	0.268886	0.177409	0.177409	0.190669	0.236844	0.214986	0.106485	0.304000	0.307354	0.049401	0.194417	0.215896
5	0.169288	0.224889	0.175632	0.175632	0.121785	0.180751	0.120280	0.094113	0.169282	0.168097	0.060505	0.168757	0.171790
6	0.140981	0.208776	0.148098	0.148098	0.106239	0.195862	0.121598	0.093995	0.160293	0.152439	0.031390	0.172574	0.174347
7	0.135985	0.172498	0.119893	0.119893	0.094441	0.157239	0.124548	0.069810	0.207662	0.214307	0.059557	0.190875	0.180096
8	0.097687	0.141683	0.124198	0.124198	0.100901	0.200958	0.112733	0.050869	0.144177	0.146477	0.010020	0.098232	0.092613
9	0.084921	0.119323	0.104921	0.104921	0.112819	0.192979	0.140725	0.092586	0.053049	0.051128	0.017725	0.065566	0.059990
10	0.175393	0.095010	0.086157	0.086157	0.113644	0.175412	0.142197	0.078302	0.053820	0.048569	0.067292	0.085638	0.082283
11	0.161517	0.138511	0.139052	0.139052	0.115881	0.120155	0.122192	0.223826	0.132217	0.124143	0.113949	0.078593	0.074415
12	0.194265	0.130951	0.147861	0.147861	0.142848	0.104137	0.116180	0.182668	0.085769	0.081182	0.154099	0.263761	0.236165
13	0.185384	0.101033	0.137235	0.137235	0.085750	0.076701	0.100072	0.154000	0.090771	0.090613	0.119988	0.169150	0.152705
14	0.135430	0.090542	0.111360	0.111360	0.083188	0.079807	0.108891	0.129920	0.071853	0.077091	0.186378	0.144750	0.129260
15	0.113228	0.074861	0.118747	0.118747	0.108148	0.082296	0.080419	0.143322	0.055230	0.057683	0.140900	0.086858	0.073262
16	0.103793	0.061904	0.113335	0.113335	0.098800	0.075565	0.093755	0.128444	0.044154	0.047376	0.132126	0.067495	0.064854
17	0.108233	0.054168	0.117167	0.117167	0.112725	0.069285	0.104540	0.136364	0.039697	0.040467	0.086949	0.056279	0.050593
18	0.066605	0.042844	0.100812	0.100812	0.129893	0.046374	0.090229	0.163918	0.039415	0.040602	0.161282	0.076507	0.070634
19	0.044403	0.036406	0.080350	0.080350	0.076108	0.029555	0.047875	0.133409	0.032156	0.029485	0.249900	0.106063	0.096684
20	0.039408	0.026539	0.065457	0.065457	0.060410	0.015403	0.044035	0.082826	0.028583	0.028107	0.112225	0.081427	0.073121
21	0.026642	0.017826	0.040491	0.040491	0.053515	0.006659	0.037604	0.053554	0.011678	0.013518	0.186807	0.060490	0.055166
22	0.022757	0.013550	0.043059	0.043059	0.040935	0.008824	0.032027	0.067600	0.013690	0.014035	0.097982	0.040221	0.038012
23	0.022757	0.007768	0.030615	0.030615	0.040137	0.001542	0.034361	0.074902	0.007033	0.006970	0.107004	0.036325	0.037125
24	0.012766	0.006887	0.026349	0.026349	0.030080	0.002748	0.017023	0.046101	0.006676	0.007163	0.111956	0.036207	0.035321
25	0.013321	0.005077	0.021845	0.021845	0.026168	0.000387	0.019712	0.035515	0.003742	0.004242	0.066329	0.022472	0.024238
26	0.008881	0.003540	0.013787	0.013787	0.015680	0.000553	0.017287	0.027753	0.003009	0.003219	0.064012	0.017356	0.018818
27	0.005550	0.002739	0.011377	0.011377	0.013471	0.000431	0.021425	0.034453	0.002219	0.002140	0.042387	0.011216	0.011609
28	0.006660	0.002739	0.008138	0.008138	0.018901	0.000508	0.021786	0.038394	0.002031	0.002189	0.064364	0.008737	0.010919
29	0.004440	0.001970	0.007308	0.007308	0.022783	0.000249	0.010682	0.027382	0.001598	0.001959	0.079281	0.007005	0.010479
30	0.047179	0.016369	0.033578	0.033578	0.052904	0.000302	0.030184	0.040249	0.007691	0.010574	0.093226	0.024479	0.048766

Brazoria County 2020 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.061795	0.061189	0.051236	0.051236	0.056623	0.056623	0.056623	0.059505	0.107326	0.108951	0.059505	0.054796	0.068825
1	0.060500	0.084498	0.069065	0.069065	0.058906	0.058781	0.059000	0.060992	0.098838	0.103650	0.061446	0.056698	0.059543
2	0.060130	0.085123	0.057148	0.057148	0.055787	0.055441	0.055725	0.058218	0.113632	0.111268	0.059616	0.044354	0.047903
3	0.053284	0.080094	0.054475	0.054475	0.076979	0.088257	0.081903	0.030756	0.089706	0.085755	0.016832	0.053668	0.060675
4	0.055134	0.089629	0.059136	0.059136	0.073896	0.087241	0.074688	0.031930	0.101333	0.102451	0.017265	0.064806	0.071965
5	0.056429	0.074963	0.058544	0.058544	0.064800	0.073271	0.072235	0.038481	0.056427	0.056032	0.017480	0.056252	0.057263
6	0.046994	0.069592	0.049366	0.049366	0.060109	0.072950	0.067439	0.033841	0.053431	0.050813	0.016168	0.057525	0.058116
7	0.045328	0.057499	0.039964	0.039964	0.037895	0.054587	0.037185	0.029629	0.069221	0.071436	0.019658	0.063625	0.060032
8	0.032562	0.047228	0.041399	0.041399	0.032631	0.058063	0.037061	0.029329	0.048059	0.048826	0.010126	0.032744	0.030871
9	0.028307	0.039774	0.034974	0.034974	0.028626	0.045687	0.037403	0.021577	0.017683	0.017043	0.019072	0.021855	0.019997
10	0.058464	0.031670	0.028719	0.028719	0.030584	0.058389	0.033855	0.015723	0.017940	0.016190	0.003209	0.028546	0.027428
11	0.053839	0.046170	0.046351	0.046351	0.033749	0.055020	0.041655	0.028360	0.044072	0.041381	0.005636	0.026198	0.024805
12	0.064755	0.043650	0.049287	0.049287	0.033542	0.048997	0.041464	0.023756	0.028590	0.027061	0.021238	0.087920	0.078722
13	0.061795	0.033678	0.045745	0.045745	0.033749	0.032921	0.035112	0.067292	0.030257	0.030204	0.035704	0.056383	0.050902
14	0.045143	0.030181	0.037120	0.037120	0.041041	0.027942	0.032880	0.054391	0.023951	0.025697	0.047926	0.048250	0.043087
15	0.037743	0.024954	0.039582	0.039582	0.024637	0.020580	0.028321	0.045855	0.018410	0.019228	0.037318	0.028953	0.024421
16	0.034598	0.020635	0.037778	0.037778	0.023580	0.020997	0.030362	0.038331	0.014718	0.015792	0.057546	0.022498	0.021618
17	0.036078	0.018056	0.039056	0.039056	0.030235	0.021194	0.022079	0.041875	0.013232	0.013489	0.043179	0.018760	0.016864
18	0.022202	0.014281	0.033604	0.033604	0.027245	0.019074	0.025355	0.037181	0.013138	0.013534	0.040195	0.025502	0.023545
19	0.014801	0.012135	0.026783	0.026783	0.030654	0.017111	0.027831	0.039087	0.010719	0.009828	0.026252	0.035354	0.032228
20	0.013136	0.008846	0.021819	0.021819	0.034835	0.011221	0.023655	0.046548	0.009528	0.009369	0.048337	0.027142	0.024374
21	0.008881	0.005942	0.013497	0.013497	0.020123	0.006993	0.012353	0.037509	0.003893	0.004506	0.074328	0.020163	0.018389
22	0.007586	0.004517	0.014353	0.014353	0.015973	0.003645	0.011362	0.023287	0.004563	0.004678	0.033379	0.013407	0.012671
23	0.007586	0.002589	0.010205	0.010205	0.013951	0.001543	0.009553	0.014916	0.002344	0.002323	0.055151	0.012108	0.012375
24	0.004255	0.002296	0.008783	0.008783	0.010520	0.001999	0.008005	0.018640	0.002225	0.002388	0.028706	0.012069	0.011774
25	0.004440	0.001692	0.007282	0.007282	0.010315	0.000349	0.008588	0.020653	0.001247	0.001414	0.031349	0.007491	0.008079
26	0.002960	0.001180	0.004596	0.004596	0.007620	0.000609	0.004188	0.012591	0.001003	0.001073	0.032556	0.005785	0.006273
27	0.001850	0.000913	0.003792	0.003792	0.006533	0.000084	0.004770	0.009602	0.000740	0.000713	0.019139	0.003739	0.003870
28	0.002220	0.000913	0.002713	0.002713	0.003915	0.000120	0.004184	0.007503	0.000677	0.000730	0.018470	0.002912	0.003640
29	0.001480	0.000657	0.002436	0.002436	0.003315	0.000091	0.005102	0.009226	0.000533	0.000653	0.012139	0.002335	0.003493
30	0.015726	0.005456	0.011193	0.011193	0.017635	0.000219	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Brazoria County 2023 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.061795	0.061189	0.051236	0.051236	0.055916	0.055916	0.055916	0.058180	0.107326	0.108951	0.058180	0.054796	0.068825
1	0.060500	0.084498	0.069065	0.069065	0.056272	0.056177	0.056259	0.058179	0.098838	0.103650	0.058578	0.056698	0.059543
2	0.060130	0.085123	0.057148	0.057148	0.053703	0.053595	0.053754	0.056574	0.113632	0.111268	0.057461	0.044354	0.047903
3	0.053284	0.080094	0.054475	0.054475	0.055079	0.054952	0.055275	0.057472	0.089706	0.085755	0.058467	0.053668	0.060675
4	0.055134	0.089629	0.059136	0.059136	0.057299	0.057046	0.057596	0.058908	0.101333	0.102451	0.060375	0.064806	0.071965
5	0.056429	0.074963	0.058544	0.058544	0.053587	0.052974	0.053667	0.055701	0.056427	0.056032	0.058115	0.056252	0.057263
6	0.046994	0.069592	0.049366	0.049366	0.072106	0.081694	0.076767	0.028881	0.053431	0.050813	0.016156	0.057525	0.058116
7	0.045328	0.057499	0.039964	0.039964	0.067500	0.078131	0.068119	0.029440	0.069221	0.071436	0.016327	0.063625	0.060032
8	0.032562	0.047228	0.041399	0.041399	0.057694	0.063477	0.064077	0.034826	0.048059	0.048826	0.016279	0.032744	0.030871
9	0.028307	0.039774	0.034974	0.034974	0.052840	0.062167	0.059003	0.030340	0.017683	0.017043	0.014941	0.021855	0.019997
10	0.058464	0.031670	0.028719	0.028719	0.032885	0.045715	0.032079	0.026323	0.017940	0.016190	0.018033	0.028546	0.027428
11	0.053839	0.046170	0.046351	0.046351	0.027950	0.047838	0.031525	0.025805	0.044072	0.041381	0.009215	0.026198	0.024805
12	0.064755	0.043650	0.049287	0.049287	0.024205	0.037017	0.031373	0.018806	0.028590	0.027061	0.017221	0.087920	0.078722
13	0.061795	0.033678	0.045745	0.045745	0.025189	0.045712	0.027598	0.013446	0.030257	0.030204	0.002852	0.056383	0.050902
14	0.045143	0.030181	0.037120	0.037120	0.027435	0.042348	0.033477	0.024021	0.023951	0.025697	0.004971	0.048250	0.043087
15	0.037743	0.024954	0.039582	0.039582	0.026908	0.037037	0.032845	0.019936	0.018410	0.019228	0.018594	0.028953	0.024421
16	0.034598	0.020635	0.037778	0.037778	0.026714	0.024469	0.027413	0.055915	0.014718	0.015792	0.031004	0.022498	0.021618
17	0.036078	0.018056	0.039056	0.039056	0.032058	0.020412	0.025303	0.044760	0.013232	0.013489	0.041292	0.018760	0.016864
18	0.022202	0.014281	0.033604	0.033604	0.018731	0.014509	0.021163	0.037012	0.013138	0.013534	0.031647	0.025502	0.023545
19	0.014801	0.012135	0.026783	0.026783	0.017689	0.014544	0.022359	0.030639	0.010719	0.009828	0.048417	0.035354	0.032228
20	0.013136	0.008846	0.021819	0.021819	0.022068	0.014159	0.015781	0.032824	0.009528	0.009369	0.035754	0.027142	0.024374
21	0.008881	0.005942	0.013497	0.013497	0.019618	0.012516	0.017856	0.028859	0.003893	0.004506	0.033019	0.020163	0.018389
22	0.007586	0.004517	0.014353	0.014353	0.021770	0.011016	0.019305	0.030050	0.004563	0.004678	0.021400	0.013407	0.012671
23	0.007586	0.002589	0.010205	0.010205	0.024396	0.007096	0.016162	0.035423	0.002344	0.002323	0.039074	0.012108	0.012375
24	0.004255	0.002296	0.008783	0.008783	0.013900	0.004343	0.008313	0.028262	0.002225	0.002388	0.059603	0.012069	0.011774
25	0.004440	0.001692	0.007282	0.007282	0.010880	0.002220	0.007530	0.017378	0.001247	0.001414	0.026560	0.007491	0.008079
26	0.002960	0.001180	0.004596	0.004596	0.009369	0.000923	0.006234	0.011017	0.001003	0.001073	0.043513	0.005785	0.006273
27	0.001850	0.000913	0.003792	0.003792	0.006966	0.001173	0.005145	0.013629	0.000740	0.000713	0.022466	0.003739	0.003870
28	0.002220	0.000913	0.002713	0.002713	0.006734	0.000201	0.005435	0.014955	0.000677	0.000730	0.024344	0.002912	0.003640
29	0.001480	0.000657	0.002436	0.002436	0.004904	0.000344	0.002609	0.009023	0.000533	0.000653	0.025065	0.002335	0.003493
30	0.015726	0.005456	0.011193	0.011193	0.017635	0.000280	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Brazoria County 2026 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.061795	0.061189	0.051236	0.051236	0.053311	0.053311	0.053311	0.055878	0.107326	0.108951	0.055878	0.054796	0.068825
1	0.060500	0.084498	0.069065	0.069065	0.053213	0.053082	0.053192	0.055727	0.098838	0.103650	0.056089	0.056698	0.059543
2	0.060130	0.085123	0.057148	0.057148	0.053415	0.053131	0.053387	0.055943	0.113632	0.111268	0.056737	0.044354	0.047903
3	0.053284	0.080094	0.054475	0.054475	0.054397	0.054004	0.054308	0.056503	0.089706	0.085755	0.058147	0.053668	0.060675
4	0.055134	0.089629	0.059136	0.059136	0.054744	0.054257	0.054641	0.056502	0.101333	0.102451	0.058545	0.064806	0.071965
5	0.056429	0.074963	0.058544	0.058544	0.051675	0.051124	0.051612	0.054469	0.056427	0.056032	0.056986	0.056252	0.057263
6	0.046994	0.069592	0.049366	0.049366	0.051827	0.051090	0.051839	0.054374	0.053431	0.050813	0.057096	0.057525	0.058116
7	0.045328	0.057499	0.039964	0.039964	0.052672	0.051595	0.052695	0.054749	0.069221	0.071436	0.058059	0.063625	0.060032
8	0.032562	0.047228	0.041399	0.041399	0.048125	0.046622	0.047904	0.050848	0.048059	0.048826	0.055022	0.032744	0.030871
9	0.028307	0.039774	0.034974	0.034974	0.064014	0.070939	0.067696	0.026131	0.017683	0.017043	0.015178	0.021855	0.019997
10	0.058464	0.031670	0.028719	0.028719	0.059196	0.066851	0.059289	0.026395	0.017940	0.016190	0.015220	0.028546	0.027428
11	0.053839	0.046170	0.046351	0.046351	0.050025	0.053616	0.055111	0.030946	0.044072	0.041381	0.015055	0.026198	0.024805
12	0.064755	0.043650	0.049287	0.049287	0.045285	0.051800	0.050126	0.026719	0.028590	0.027061	0.013710	0.087920	0.078722
13	0.061795	0.033678	0.045745	0.045745	0.027519	0.037038	0.026572	0.022762	0.030257	0.030204	0.016287	0.056383	0.050902
14	0.045143	0.030181	0.037120	0.037120	0.023114	0.038227	0.025789	0.022114	0.023951	0.025697	0.008257	0.048250	0.043087
15	0.037743	0.024954	0.039582	0.039582	0.019768	0.029133	0.025323	0.015965	0.018410	0.019228	0.015311	0.028953	0.024421
16	0.034598	0.020635	0.037778	0.037778	0.020334	0.035504	0.022005	0.011312	0.014718	0.015792	0.002516	0.022498	0.021618
17	0.036078	0.018056	0.039056	0.039056	0.021884	0.032433	0.026359	0.020025	0.013232	0.013489	0.004349	0.018760	0.016864
18	0.022202	0.014281	0.033604	0.033604	0.020946	0.027559	0.025198	0.016314	0.013138	0.013534	0.016009	0.025502	0.023545
19	0.014801	0.012135	0.026783	0.026783	0.020545	0.017950	0.020764	0.045336	0.010719	0.009828	0.026480	0.035354	0.032228
20	0.013136	0.008846	0.021819	0.021819	0.024052	0.014542	0.018668	0.035616	0.009528	0.009369	0.034700	0.027142	0.024374
21	0.008881	0.005942	0.013497	0.013497	0.013883	0.010189	0.015413	0.029179	0.003893	0.004506	0.026380	0.020163	0.018389
22	0.007586	0.004517	0.014353	0.014353	0.012940	0.010052	0.016058	0.023923	0.004563	0.004678	0.040035	0.013407	0.012671
23	0.007586	0.002589	0.010205	0.010205	0.015951	0.009652	0.011191	0.025391	0.002344	0.002323	0.029321	0.012108	0.012375
24	0.004255	0.002296	0.008783	0.008783	0.014005	0.008408	0.012497	0.022116	0.002225	0.002388	0.026858	0.012069	0.011774
25	0.004440	0.001692	0.007282	0.007282	0.015337	0.007281	0.013322	0.022806	0.001247	0.001414	0.017266	0.007491	0.008079
26	0.002960	0.001180	0.004596	0.004596	0.016979	0.004626	0.011010	0.026631	0.001003	0.001073	0.031264	0.005785	0.006273
27	0.001850	0.000913	0.003792	0.003792	0.009554	0.002789	0.005589	0.021048	0.000740	0.000713	0.047300	0.003739	0.003870
28	0.002220	0.000913	0.002713	0.002713	0.007379	0.001402	0.004990	0.012815	0.000677	0.000730	0.020905	0.002912	0.003640
29	0.001480	0.000657	0.002436	0.002436	0.006276	0.000575	0.004078	0.008047	0.000533	0.000653	0.033963	0.002335	0.003493
30	0.015726	0.005456	0.011193	0.011193	0.017635	0.001218	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Brazoria County 2027 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.061795	0.061189	0.051236	0.051236	0.052770	0.052770	0.052770	0.055385	0.107326	0.108951	0.055385	0.054796	0.068825
1	0.060500	0.084498	0.069065	0.069065	0.052814	0.052631	0.052756	0.055139	0.098838	0.103650	0.056488	0.056698	0.059543
2	0.060130	0.085123	0.057148	0.057148	0.052718	0.052406	0.052638	0.054991	0.113632	0.111268	0.056702	0.044354	0.047903
3	0.053284	0.080094	0.054475	0.054475	0.052918	0.052454	0.052831	0.055204	0.089706	0.085755	0.057356	0.053668	0.060675
4	0.055134	0.089629	0.059136	0.059136	0.053891	0.053316	0.053743	0.055756	0.101333	0.102451	0.058781	0.064806	0.071965
5	0.056429	0.074963	0.058544	0.058544	0.053660	0.052939	0.053478	0.055275	0.056427	0.056032	0.058720	0.056252	0.057263
6	0.046994	0.069592	0.049366	0.049366	0.050110	0.049293	0.049951	0.052822	0.053431	0.050813	0.056704	0.057525	0.058116
7	0.045328	0.057499	0.039964	0.039964	0.050257	0.049260	0.050171	0.052730	0.069221	0.071436	0.056813	0.063625	0.060032
8	0.032562	0.047228	0.041399	0.041399	0.050525	0.049151	0.050427	0.052628	0.048059	0.048826	0.057311	0.032744	0.030871
9	0.028307	0.039774	0.034974	0.034974	0.046163	0.044413	0.045842	0.048878	0.017683	0.017043	0.054314	0.021855	0.019997
10	0.058464	0.031670	0.028719	0.028719	0.061404	0.067579	0.064781	0.025119	0.017940	0.016190	0.014982	0.028546	0.027428
11	0.053839	0.046170	0.046351	0.046351	0.056161	0.062912	0.056092	0.025148	0.044072	0.041381	0.014903	0.026198	0.024805
12	0.064755	0.043650	0.049287	0.049287	0.047461	0.050457	0.052138	0.029484	0.028590	0.027061	0.014741	0.087920	0.078722
13	0.061795	0.033678	0.045745	0.045745	0.042489	0.048150	0.046877	0.025230	0.030257	0.030204	0.013316	0.056383	0.050902
14	0.045143	0.030181	0.037120	0.037120	0.025820	0.034428	0.024850	0.021493	0.023951	0.025697	0.015819	0.048250	0.043087
15	0.037743	0.024954	0.039582	0.039582	0.021687	0.035534	0.024118	0.020881	0.018410	0.019228	0.008020	0.028953	0.024421
16	0.034598	0.020635	0.037778	0.037778	0.018340	0.026744	0.023407	0.014939	0.014718	0.015792	0.014749	0.022498	0.021618
17	0.036078	0.018056	0.039056	0.039056	0.018865	0.032592	0.020340	0.010585	0.013232	0.013489	0.002423	0.018760	0.016864
18	0.022202	0.014281	0.033604	0.033604	0.020074	0.029399	0.024077	0.018568	0.013138	0.013534	0.004155	0.025502	0.023545
19	0.014801	0.012135	0.026783	0.026783	0.019213	0.024981	0.023017	0.015126	0.010719	0.009828	0.015295	0.035354	0.032228
20	0.013136	0.008846	0.021819	0.021819	0.018630	0.016064	0.018740	0.041651	0.009528	0.009369	0.025089	0.027142	0.024374
21	0.008881	0.005942	0.013497	0.013497	0.021810	0.013014	0.016849	0.032722	0.003893	0.004506	0.032878	0.020163	0.018389
22	0.007586	0.004517	0.014353	0.014353	0.012589	0.009118	0.013911	0.026807	0.004563	0.004678	0.024995	0.013407	0.012671
23	0.007586	0.002589	0.010205	0.010205	0.011598	0.008880	0.014318	0.021775	0.002344	0.002323	0.037614	0.012108	0.012375
24	0.004255	0.002296	0.008783	0.008783	0.014297	0.008526	0.009979	0.023111	0.002225	0.002388	0.027548	0.012069	0.011774
25	0.004440	0.001692	0.007282	0.007282	0.012553	0.007427	0.011144	0.020130	0.001247	0.001414	0.025235	0.007491	0.008079
26	0.002960	0.001180	0.004596	0.004596	0.013586	0.006348	0.011734	0.020564	0.001003	0.001073	0.016085	0.005785	0.006273
27	0.001850	0.000913	0.003792	0.003792	0.015041	0.004033	0.009698	0.024014	0.000740	0.000713	0.029126	0.003739	0.003870
28	0.002220	0.000913	0.002713	0.002713	0.008463	0.002432	0.004923	0.018979	0.000677	0.000730	0.044065	0.002912	0.003640
29	0.001480	0.000657	0.002436	0.002436	0.006459	0.001206	0.004341	0.011447	0.000533	0.000653	0.019310	0.002335	0.003493
30	0.015726	0.005456	0.011193	0.011193	0.017635	0.001542	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Chambers County 2011 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.067365	0.074170	0.061786	0.061786	0.036180	0.074697	0.043899	0.020412	0.107326	0.108951	0.017572	0.054796	0.068825
1	0.074850	0.102367	0.085650	0.085650	0.039841	0.101513	0.042214	0.015110	0.098838	0.103650	0.002979	0.056698	0.059543
2	0.059880	0.099585	0.070976	0.070976	0.046623	0.104812	0.055843	0.028331	0.113632	0.111268	0.005313	0.044354	0.047903
3	0.086826	0.089212	0.060009	0.060009	0.049281	0.102921	0.059585	0.025227	0.089706	0.085755	0.020619	0.053668	0.060675
4	0.061377	0.094964	0.061863	0.061863	0.052966	0.076456	0.054774	0.076490	0.101333	0.102451	0.035762	0.064806	0.071965
5	0.047904	0.075538	0.063176	0.063176	0.068397	0.072053	0.055227	0.064970	0.056427	0.056032	0.048854	0.056252	0.057263
6	0.052395	0.065871	0.050587	0.050587	0.042648	0.057371	0.050452	0.056933	0.053431	0.050813	0.038874	0.057525	0.058116
7	0.035928	0.056017	0.041628	0.041628	0.042736	0.064267	0.058689	0.049088	0.069221	0.071436	0.060535	0.063625	0.060032
8	0.019461	0.040881	0.043173	0.043173	0.057372	0.070033	0.045203	0.055546	0.048059	0.048826	0.046135	0.032744	0.030871
9	0.029940	0.032676	0.032592	0.032592	0.054751	0.068493	0.055453	0.052116	0.017683	0.017043	0.044240	0.021855	0.019997
10	0.055389	0.027773	0.027495	0.027495	0.065557	0.068653	0.065744	0.057687	0.017940	0.016190	0.029414	0.028546	0.027428
11	0.055389	0.040834	0.045876	0.045876	0.078557	0.049889	0.060342	0.072218	0.044072	0.041381	0.055786	0.026198	0.024805
12	0.050898	0.039655	0.045181	0.045181	0.047578	0.034391	0.034339	0.060105	0.028590	0.027061	0.086656	0.087920	0.078722
13	0.071856	0.028150	0.039002	0.039002	0.039627	0.019471	0.033557	0.038712	0.030257	0.030204	0.039532	0.056383	0.050902
14	0.043413	0.023199	0.032901	0.032901	0.036599	0.009178	0.030650	0.026002	0.023951	0.025697	0.066825	0.048250	0.043087
15	0.034431	0.023152	0.035218	0.035218	0.029292	0.013218	0.027866	0.034289	0.018410	0.019228	0.035417	0.028953	0.024421
16	0.038922	0.016645	0.034600	0.034600	0.030064	0.002472	0.031547	0.039908	0.014718	0.015792	0.039586	0.022498	0.021618
17	0.017964	0.015466	0.034909	0.034909	0.023718	0.004862	0.016693	0.025686	0.013232	0.013489	0.041853	0.018760	0.016864
18	0.011976	0.010798	0.030816	0.030816	0.021178	0.000730	0.020301	0.020470	0.013138	0.013534	0.025183	0.025502	0.023545
19	0.017964	0.010232	0.020853	0.020853	0.013178	0.001112	0.018896	0.016540	0.010719	0.009828	0.024551	0.035354	0.032228
20	0.010479	0.007591	0.017300	0.017300	0.011799	0.000936	0.024538	0.021137	0.009528	0.009369	0.016394	0.027142	0.024374
21	0.019461	0.005847	0.010504	0.010504	0.017000	0.001181	0.026242	0.024395	0.003893	0.004506	0.025289	0.020163	0.018389
22	0.005988	0.004149	0.012975	0.012975	0.021289	0.000616	0.013673	0.017998	0.004563	0.004678	0.031470	0.013407	0.012671
23	0.011976	0.002499	0.010040	0.010040	0.013982	0.000249	0.014528	0.019271	0.002344	0.002323	0.028159	0.012108	0.012375
24	0.001497	0.002310	0.006796	0.006796	0.009457	0.000070	0.013551	0.017751	0.002225	0.002388	0.025783	0.012069	0.011774
25	0.004491	0.001980	0.005329	0.005329	0.007992	0.000024	0.010508	0.012854	0.001247	0.001414	0.015597	0.007491	0.008079
26	0.004491	0.001273	0.003167	0.003167	0.008237	0.000050	0.007903	0.012188	0.001003	0.001073	0.016256	0.005785	0.006273
27	0.000000	0.000754	0.002858	0.002858	0.006363	0.000037	0.006810	0.010137	0.000740	0.000713	0.015723	0.003739	0.003870
28	0.000000	0.000660	0.001699	0.001699	0.005349	0.000027	0.005974	0.008018	0.000677	0.000730	0.014339	0.002912	0.003640
29	0.001497	0.000236	0.001931	0.001931	0.004757	0.000020	0.004936	0.006995	0.000533	0.000653	0.014229	0.002335	0.003493
30	0.005988	0.005517	0.009113	0.009113	0.017635	0.000198	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Chambers County 2017 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.067365	0.074170	0.061786	0.061786	0.078824	0.091142	0.083978	0.031614	0.107326	0.108951	0.016664	0.054796	0.068825
1	0.074850	0.102367	0.085650	0.085650	0.075667	0.090093	0.076580	0.032820	0.098838	0.103650	0.017093	0.056698	0.059543
2	0.059880	0.099585	0.070976	0.070976	0.067199	0.077034	0.075099	0.039904	0.113632	0.111268	0.017428	0.044354	0.047903
3	0.086826	0.089212	0.060009	0.060009	0.063959	0.079629	0.072132	0.035734	0.089706	0.085755	0.016351	0.053668	0.060675
4	0.061377	0.094964	0.061863	0.061863	0.041394	0.062045	0.040955	0.031878	0.101333	0.102451	0.020170	0.064806	0.071965
5	0.047904	0.075538	0.063176	0.063176	0.036596	0.068674	0.042028	0.032138	0.056427	0.056032	0.010539	0.056252	0.057263
6	0.052395	0.065871	0.050587	0.050587	0.032532	0.055132	0.043047	0.023869	0.053431	0.050813	0.019997	0.057525	0.058116
7	0.035928	0.056017	0.041628	0.041628	0.035230	0.072004	0.039560	0.017559	0.069221	0.071436	0.003389	0.063625	0.060032
8	0.019461	0.040881	0.043173	0.043173	0.039392	0.069145	0.049382	0.031958	0.048059	0.048826	0.005994	0.032744	0.030871
9	0.029940	0.032676	0.032592	0.032592	0.039680	0.062851	0.049899	0.027028	0.017683	0.017043	0.022758	0.021855	0.019997
10	0.055389	0.027773	0.027495	0.027495	0.041020	0.044016	0.043545	0.078002	0.017940	0.016190	0.038819	0.028546	0.027428
11	0.055389	0.040834	0.045876	0.045876	0.050566	0.038149	0.041402	0.063658	0.044072	0.041381	0.052497	0.026198	0.024805
12	0.050898	0.039655	0.045181	0.045181	0.030779	0.028742	0.036224	0.054189	0.028590	0.027061	0.041177	0.087920	0.078722
13	0.071856	0.028150	0.039002	0.039002	0.029860	0.029906	0.039417	0.045716	0.030257	0.030204	0.063961	0.056383	0.050902
14	0.043413	0.023199	0.032901	0.032901	0.038819	0.030838	0.029111	0.050432	0.023951	0.025697	0.048354	0.048250	0.043087
15	0.034431	0.023152	0.035218	0.035218	0.035967	0.028980	0.034482	0.045640	0.018410	0.019228	0.045680	0.028953	0.024421
16	0.038922	0.016645	0.034600	0.034600	0.041037	0.026572	0.038448	0.048454	0.014718	0.015792	0.030061	0.022498	0.021618
17	0.017964	0.015466	0.034909	0.034909	0.047968	0.018212	0.033726	0.058821	0.013232	0.013489	0.056177	0.018760	0.016864
18	0.011976	0.010798	0.030816	0.030816	0.028106	0.011607	0.017894	0.047873	0.013138	0.013534	0.087043	0.025502	0.023545
19	0.017964	0.010232	0.020853	0.020853	0.022635	0.006198	0.016732	0.030019	0.010719	0.009828	0.039384	0.035354	0.032228
20	0.010479	0.007591	0.017300	0.017300	0.020051	0.002680	0.014288	0.019410	0.009528	0.009369	0.065558	0.027142	0.024374
21	0.019461	0.005847	0.010504	0.010504	0.015338	0.003551	0.012169	0.024501	0.003893	0.004506	0.034386	0.020163	0.018389
22	0.005988	0.004149	0.012975	0.012975	0.015262	0.000636	0.013276	0.027421	0.004563	0.004678	0.037837	0.013407	0.012671
23	0.011976	0.002499	0.010040	0.010040	0.011438	0.001134	0.006577	0.016877	0.002344	0.002323	0.039588	0.012108	0.012375
24	0.001497	0.002310	0.006796	0.006796	0.009950	0.000160	0.007616	0.013002	0.002225	0.002388	0.023454	0.012069	0.011774
25	0.004491	0.001980	0.005329	0.005329	0.006052	0.000234	0.006794	0.010264	0.001247	0.001414	0.022808	0.007491	0.008079
26	0.004491	0.001273	0.003167	0.003167	0.005200	0.000182	0.008420	0.012742	0.001003	0.001073	0.015103	0.005785	0.006273
27	0.000000	0.000754	0.002858	0.002858	0.007295	0.000215	0.008562	0.014199	0.000740	0.000713	0.022934	0.003739	0.003870
28	0.000000	0.000660	0.001699	0.001699	0.008928	0.000108	0.004271	0.010231	0.000677	0.000730	0.028466	0.002912	0.003640
29	0.001497	0.000236	0.001931	0.001931	0.005620	0.000040	0.004325	0.010633	0.000533	0.000653	0.025257	0.002335	0.003493
30	0.005988	0.005517	0.009113	0.009113	0.017635	0.000091	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Chambers County 2018 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.067365	0.074170	0.061786	0.061786	0.056764	0.056764	0.056764	0.059441	0.107326	0.108951	0.059441	0.054796	0.068825
1	0.074850	0.102367	0.085650	0.085650	0.078327	0.090363	0.083431	0.031402	0.098838	0.103650	0.016783	0.056698	0.059543
2	0.059880	0.099585	0.070976	0.070976	0.075191	0.089323	0.076081	0.032600	0.113632	0.111268	0.017214	0.044354	0.047903
3	0.086826	0.089212	0.060009	0.060009	0.066776	0.076375	0.074609	0.039636	0.089706	0.085755	0.017551	0.053668	0.060675
4	0.061377	0.094964	0.061863	0.061863	0.063556	0.078948	0.071662	0.035495	0.101333	0.102451	0.016467	0.064806	0.071965
5	0.047904	0.075538	0.063176	0.063176	0.040595	0.060250	0.040093	0.031371	0.056427	0.056032	0.020168	0.056252	0.057263
6	0.052395	0.065871	0.050587	0.050587	0.035413	0.065287	0.040533	0.031332	0.053431	0.050813	0.010463	0.057525	0.058116
7	0.035928	0.056017	0.041628	0.041628	0.031480	0.052413	0.041516	0.023270	0.069221	0.071436	0.019852	0.063625	0.060032
8	0.019461	0.040881	0.043173	0.043173	0.033634	0.066986	0.037578	0.016956	0.048059	0.048826	0.003340	0.032744	0.030871
9	0.029940	0.032676	0.032592	0.032592	0.037606	0.064326	0.046908	0.030862	0.017683	0.017043	0.005908	0.021855	0.019997
10	0.055389	0.027773	0.027495	0.027495	0.037881	0.058471	0.047399	0.026101	0.017940	0.016190	0.022431	0.028546	0.027428
11	0.055389	0.040834	0.045876	0.045876	0.038627	0.040052	0.040731	0.074609	0.044072	0.041381	0.037983	0.026198	0.024805
12	0.050898	0.039655	0.045181	0.045181	0.047616	0.034712	0.038727	0.060889	0.028590	0.027061	0.051366	0.087920	0.078722
13	0.071856	0.028150	0.039002	0.039002	0.028583	0.025567	0.033357	0.051333	0.030257	0.030204	0.039996	0.056383	0.050902
14	0.043413	0.023199	0.032901	0.032901	0.027729	0.026602	0.036297	0.043307	0.023951	0.025697	0.062126	0.048250	0.043087
15	0.034431	0.023152	0.035218	0.035218	0.036049	0.027432	0.026806	0.047774	0.018410	0.019228	0.046967	0.028953	0.024421
16	0.038922	0.016645	0.034600	0.034600	0.032933	0.025188	0.031252	0.042815	0.014718	0.015792	0.044042	0.022498	0.021618
17	0.017964	0.015466	0.034909	0.034909	0.037575	0.023095	0.034847	0.045455	0.013232	0.013489	0.028983	0.018760	0.016864
18	0.011976	0.010798	0.030816	0.030816	0.043298	0.015458	0.030076	0.054639	0.013138	0.013534	0.053761	0.025502	0.023545
19	0.017964	0.010232	0.020853	0.020853	0.025369	0.009852	0.015958	0.044470	0.010719	0.009828	0.083300	0.035354	0.032228
20	0.010479	0.007591	0.017300	0.017300	0.020137	0.005134	0.014678	0.027609	0.009528	0.009369	0.037408	0.027142	0.024374
21	0.019461	0.005847	0.010504	0.010504	0.017838	0.002220	0.012535	0.017851	0.003893	0.004506	0.062269	0.020163	0.018389
22	0.005988	0.004149	0.012975	0.012975	0.013645	0.002941	0.010676	0.022533	0.004563	0.004678	0.032661	0.013407	0.012671
23	0.011976	0.002499	0.010040	0.010040	0.013379	0.000514	0.011454	0.024967	0.002344	0.002323	0.035668	0.012108	0.012375
24	0.001497	0.002310	0.006796	0.006796	0.010027	0.000916	0.005674	0.015367	0.002225	0.002388	0.037319	0.012069	0.011774
25	0.004491	0.001980	0.005329	0.005329	0.008723	0.000129	0.006571	0.011838	0.001247	0.001414	0.022110	0.007491	0.008079
26	0.004491	0.001273	0.003167	0.003167	0.005227	0.000184	0.005762	0.009251	0.001003	0.001073	0.021337	0.005785	0.006273
27	0.000000	0.000754	0.002858	0.002858	0.004490	0.000144	0.007142	0.011484	0.000740	0.000713	0.014129	0.003739	0.003870
28	0.000000	0.000660	0.001699	0.001699	0.006300	0.000169	0.007262	0.012798	0.000677	0.000730	0.021455	0.002912	0.003640
29	0.001497	0.000236	0.001931	0.001931	0.007594	0.000083	0.003561	0.009127	0.000533	0.000653	0.026427	0.002335	0.003493
30	0.005988	0.005517	0.009113	0.009113	0.017635	0.000101	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Chambers County 2020 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.067365	0.074170	0.061786	0.061786	0.056623	0.056623	0.056623	0.059505	0.107326	0.108951	0.059505	0.054796	0.068825
1	0.074850	0.102367	0.085650	0.085650	0.058906	0.058781	0.059000	0.060992	0.098838	0.103650	0.061446	0.056698	0.059543
2	0.059880	0.099585	0.070976	0.070976	0.055787	0.055441	0.055725	0.058218	0.113632	0.111268	0.059616	0.044354	0.047903
3	0.086826	0.089212	0.060009	0.060009	0.076979	0.088257	0.081903	0.030756	0.089706	0.085755	0.016832	0.053668	0.060675
4	0.061377	0.094964	0.061863	0.061863	0.073896	0.087241	0.074688	0.031930	0.101333	0.102451	0.017265	0.064806	0.071965
5	0.047904	0.075538	0.063176	0.063176	0.064800	0.073271	0.072235	0.038481	0.056427	0.056032	0.017480	0.056252	0.057263
6	0.052395	0.065871	0.050587	0.050587	0.060109	0.072950	0.067439	0.033841	0.053431	0.050813	0.016168	0.057525	0.058116
7	0.035928	0.056017	0.041628	0.041628	0.037895	0.054587	0.037185	0.029629	0.069221	0.071436	0.019658	0.063625	0.060032
8	0.019461	0.040881	0.043173	0.043173	0.032631	0.058063	0.037061	0.029329	0.048059	0.048826	0.010126	0.032744	0.030871
9	0.029940	0.032676	0.032592	0.032592	0.028626	0.045687	0.037403	0.021577	0.017683	0.017043	0.019072	0.021855	0.019997
10	0.055389	0.027773	0.027495	0.027495	0.030584	0.058389	0.033855	0.015723	0.017940	0.016190	0.003209	0.028546	0.027428
11	0.055389	0.040834	0.045876	0.045876	0.033749	0.055020	0.041655	0.028360	0.044072	0.041381	0.005636	0.026198	0.024805
12	0.050898	0.039655	0.045181	0.045181	0.033542	0.048997	0.041464	0.023756	0.028590	0.027061	0.021238	0.087920	0.078722
13	0.071856	0.028150	0.039002	0.039002	0.033749	0.032921	0.035112	0.067292	0.030257	0.030204	0.035704	0.056383	0.050902
14	0.043413	0.023199	0.032901	0.032901	0.041041	0.027942	0.032880	0.054391	0.023951	0.025697	0.047926	0.048250	0.043087
15	0.034431	0.023152	0.035218	0.035218	0.024637	0.020580	0.028321	0.045855	0.018410	0.019228	0.037318	0.028953	0.024421
16	0.038922	0.016645	0.034600	0.034600	0.023580	0.020997	0.030362	0.038331	0.014718	0.015792	0.057546	0.022498	0.021618
17	0.017964	0.015466	0.034909	0.034909	0.030235	0.021194	0.022079	0.041875	0.013232	0.013489	0.043179	0.018760	0.016864
18	0.011976	0.010798	0.030816	0.030816	0.027245	0.019074	0.025355	0.037181	0.013138	0.013534	0.040195	0.025502	0.023545
19	0.017964	0.010232	0.020853	0.020853	0.030654	0.017111	0.027831	0.039087	0.010719	0.009828	0.026252	0.035354	0.032228
20	0.010479	0.007591	0.017300	0.017300	0.034835	0.011221	0.023655	0.046548	0.009528	0.009369	0.048337	0.027142	0.024374
21	0.019461	0.005847	0.010504	0.010504	0.020123	0.006993	0.012353	0.037509	0.003893	0.004506	0.074328	0.020163	0.018389
22	0.005988	0.004149	0.012975	0.012975	0.015973	0.003645	0.011362	0.023287	0.004563	0.004678	0.033379	0.013407	0.012671
23	0.011976	0.002499	0.010040	0.010040	0.013951	0.001543	0.009553	0.014916	0.002344	0.002323	0.055151	0.012108	0.012375
24	0.001497	0.002310	0.006796	0.006796	0.010520	0.001999	0.008005	0.018640	0.002225	0.002388	0.028706	0.012069	0.011774
25	0.004491	0.001980	0.005329	0.005329	0.010315	0.000349	0.008588	0.020653	0.001247	0.001414	0.031349	0.007491	0.008079
26	0.004491	0.001273	0.003167	0.003167	0.007620	0.000609	0.004188	0.012591	0.001003	0.001073	0.032556	0.005785	0.006273
27	0.000000	0.000754	0.002858	0.002858	0.006533	0.000084	0.004770	0.009602	0.000740	0.000713	0.019139	0.003739	0.003870
28	0.000000	0.000660	0.001699	0.001699	0.003915	0.000120	0.004184	0.007503	0.000677	0.000730	0.018470	0.002912	0.003640
29	0.001497	0.000236	0.001931	0.001931	0.003315	0.000091	0.005102	0.009226	0.000533	0.000653	0.012139	0.002335	0.003493
30	0.005988	0.005517	0.009113	0.009113	0.017635	0.000219	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Chambers County 2023 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.067365	0.074170	0.061786	0.061786	0.055916	0.055916	0.055916	0.058180	0.107326	0.108951	0.058180	0.054796	0.068825
1	0.074850	0.102367	0.085650	0.085650	0.056272	0.056177	0.056259	0.058179	0.098838	0.103650	0.058578	0.056698	0.059543
2	0.059880	0.099585	0.070976	0.070976	0.053703	0.053595	0.053754	0.056574	0.113632	0.111268	0.057461	0.044354	0.047903
3	0.086826	0.089212	0.060009	0.060009	0.055079	0.054952	0.055275	0.057472	0.089706	0.085755	0.058467	0.053668	0.060675
4	0.061377	0.094964	0.061863	0.061863	0.057299	0.057046	0.057596	0.058908	0.101333	0.102451	0.060375	0.064806	0.071965
5	0.047904	0.075538	0.063176	0.063176	0.053587	0.052974	0.053667	0.055701	0.056427	0.056032	0.058115	0.056252	0.057263
6	0.052395	0.065871	0.050587	0.050587	0.072106	0.081694	0.076767	0.028881	0.053431	0.050813	0.016156	0.057525	0.058116
7	0.035928	0.056017	0.041628	0.041628	0.067500	0.078131	0.068119	0.029440	0.069221	0.071436	0.016327	0.063625	0.060032
8	0.019461	0.040881	0.043173	0.043173	0.057694	0.063477	0.064077	0.034826	0.048059	0.048826	0.016279	0.032744	0.030871
9	0.029940	0.032676	0.032592	0.032592	0.052840	0.062167	0.059003	0.030340	0.017683	0.017043	0.014941	0.021855	0.019997
10	0.055389	0.027773	0.027495	0.027495	0.032885	0.045715	0.032079	0.026323	0.017940	0.016190	0.018033	0.028546	0.027428
11	0.055389	0.040834	0.045876	0.045876	0.027950	0.047838	0.031525	0.025805	0.044072	0.041381	0.009215	0.026198	0.024805
12	0.050898	0.039655	0.045181	0.045181	0.024205	0.037017	0.031373	0.018806	0.028590	0.027061	0.017221	0.087920	0.078722
13	0.071856	0.028150	0.039002	0.039002	0.025189	0.045712	0.027598	0.013446	0.030257	0.030204	0.002852	0.056383	0.050902
14	0.043413	0.023199	0.032901	0.032901	0.027435	0.042348	0.033477	0.024021	0.023951	0.025697	0.004971	0.048250	0.043087
15	0.034431	0.023152	0.035218	0.035218	0.026908	0.037037	0.032845	0.019936	0.018410	0.019228	0.018594	0.028953	0.024421
16	0.038922	0.016645	0.034600	0.034600	0.026714	0.024469	0.027413	0.055915	0.014718	0.015792	0.031004	0.022498	0.021618
17	0.017964	0.015466	0.034909	0.034909	0.032058	0.020412	0.025303	0.044760	0.013232	0.013489	0.041292	0.018760	0.016864
18	0.011976	0.010798	0.030816	0.030816	0.018731	0.014509	0.021163	0.037012	0.013138	0.013534	0.031647	0.025502	0.023545
19	0.017964	0.010232	0.020853	0.020853	0.017689	0.014544	0.022359	0.030639	0.010719	0.009828	0.048417	0.035354	0.032228
20	0.010479	0.007591	0.017300	0.017300	0.022068	0.014159	0.015781	0.032824	0.009528	0.009369	0.035754	0.027142	0.024374
21	0.019461	0.005847	0.010504	0.010504	0.019618	0.012516	0.017856	0.028859	0.003893	0.004506	0.033019	0.020163	0.018389
22	0.005988	0.004149	0.012975	0.012975	0.021770	0.011016	0.019305	0.030050	0.004563	0.004678	0.021400	0.013407	0.012671
23	0.011976	0.002499	0.010040	0.010040	0.024396	0.007096	0.016162	0.035423	0.002344	0.002323	0.039074	0.012108	0.012375
24	0.001497	0.002310	0.006796	0.006796	0.013900	0.004343	0.008313	0.028262	0.002225	0.002388	0.059603	0.012069	0.011774
25	0.004491	0.001980	0.005329	0.005329	0.010880	0.002220	0.007530	0.017378	0.001247	0.001414	0.026560	0.007491	0.008079
26	0.004491	0.001273	0.003167	0.003167	0.009369	0.000923	0.006234	0.011017	0.001003	0.001073	0.043513	0.005785	0.006273
27	0.000000	0.000754	0.002858	0.002858	0.006966	0.001173	0.005145	0.013629	0.000740	0.000713	0.022466	0.003739	0.003870
28	0.000000	0.000660	0.001699	0.001699	0.006734	0.000201	0.005435	0.014955	0.000677	0.000730	0.024344	0.002912	0.003640
29	0.001497	0.000236	0.001931	0.001931	0.004904	0.000344	0.002609	0.009023	0.000533	0.000653	0.025065	0.002335	0.003493
30	0.005988	0.005517	0.009113	0.009113	0.017635	0.000280	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Chambers County 2026 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.067365	0.074170	0.061786	0.061786	0.053311	0.053311	0.053311	0.055878	0.107326	0.108951	0.055878	0.054796	0.068825
1	0.074850	0.102367	0.085650	0.085650	0.053213	0.053082	0.053192	0.055727	0.098838	0.103650	0.056089	0.056698	0.059543
2	0.059880	0.099585	0.070976	0.070976	0.053415	0.053131	0.053387	0.055943	0.113632	0.111268	0.056737	0.044354	0.047903
3	0.086826	0.089212	0.060009	0.060009	0.054397	0.054004	0.054308	0.056503	0.089706	0.085755	0.058147	0.053668	0.060675
4	0.061377	0.094964	0.061863	0.061863	0.054744	0.054257	0.054641	0.056502	0.101333	0.102451	0.058545	0.064806	0.071965
5	0.047904	0.075538	0.063176	0.063176	0.051675	0.051124	0.051612	0.054469	0.056427	0.056032	0.056986	0.056252	0.057263
6	0.052395	0.065871	0.050587	0.050587	0.051827	0.051090	0.051839	0.054374	0.053431	0.050813	0.057096	0.057525	0.058116
7	0.035928	0.056017	0.041628	0.041628	0.052672	0.051595	0.052695	0.054749	0.069221	0.071436	0.058059	0.063625	0.060032
8	0.019461	0.040881	0.043173	0.043173	0.048125	0.046622	0.047904	0.050848	0.048059	0.048826	0.055022	0.032744	0.030871
9	0.029940	0.032676	0.032592	0.032592	0.064014	0.070939	0.067696	0.026131	0.017683	0.017043	0.015178	0.021855	0.019997
10	0.055389	0.027773	0.027495	0.027495	0.059196	0.066851	0.059289	0.026395	0.017940	0.016190	0.015220	0.028546	0.027428
11	0.055389	0.040834	0.045876	0.045876	0.050025	0.053616	0.055111	0.030946	0.044072	0.041381	0.015055	0.026198	0.024805
12	0.050898	0.039655	0.045181	0.045181	0.045285	0.051800	0.050126	0.026719	0.028590	0.027061	0.013710	0.087920	0.078722
13	0.071856	0.028150	0.039002	0.039002	0.027519	0.037038	0.026572	0.022762	0.030257	0.030204	0.016287	0.056383	0.050902
14	0.043413	0.023199	0.032901	0.032901	0.023114	0.038227	0.025789	0.022114	0.023951	0.025697	0.008257	0.048250	0.043087
15	0.034431	0.023152	0.035218	0.035218	0.019768	0.029133	0.025323	0.015965	0.018410	0.019228	0.015311	0.028953	0.024421
16	0.038922	0.016645	0.034600	0.034600	0.020334	0.035504	0.022005	0.011312	0.014718	0.015792	0.002516	0.022498	0.021618
17	0.017964	0.015466	0.034909	0.034909	0.021884	0.032433	0.026359	0.020025	0.013232	0.013489	0.004349	0.018760	0.016864
18	0.011976	0.010798	0.030816	0.030816	0.020946	0.027559	0.025198	0.016314	0.013138	0.013534	0.016009	0.025502	0.023545
19	0.017964	0.010232	0.020853	0.020853	0.020545	0.017950	0.020764	0.045336	0.010719	0.009828	0.026480	0.035354	0.032228
20	0.010479	0.007591	0.017300	0.017300	0.024052	0.014542	0.018668	0.035616	0.009528	0.009369	0.034700	0.027142	0.024374
21	0.019461	0.005847	0.010504	0.010504	0.013883	0.010189	0.015413	0.029179	0.003893	0.004506	0.026380	0.020163	0.018389
22	0.005988	0.004149	0.012975	0.012975	0.012940	0.010052	0.016058	0.023923	0.004563	0.004678	0.040035	0.013407	0.012671
23	0.011976	0.002499	0.010040	0.010040	0.015951	0.009652	0.011191	0.025391	0.002344	0.002323	0.029321	0.012108	0.012375
24	0.001497	0.002310	0.006796	0.006796	0.014005	0.008408	0.012497	0.022116	0.002225	0.002388	0.026858	0.012069	0.011774
25	0.004491	0.001980	0.005329	0.005329	0.015337	0.007281	0.013322	0.022806	0.001247	0.001414	0.017266	0.007491	0.008079
26	0.004491	0.001273	0.003167	0.003167	0.016979	0.004626	0.011010	0.026631	0.001003	0.001073	0.031264	0.005785	0.006273
27	0.000000	0.000754	0.002858	0.002858	0.009554	0.002789	0.005589	0.021048	0.000740	0.000713	0.047300	0.003739	0.003870
28	0.000000	0.000660	0.001699	0.001699	0.007379	0.001402	0.004990	0.012815	0.000677	0.000730	0.020905	0.002912	0.003640
29	0.001497	0.000236	0.001931	0.001931	0.006276	0.000575	0.004078	0.008047	0.000533	0.000653	0.033963	0.002335	0.003493
30	0.005988	0.005517	0.009113	0.009113	0.017635	0.001218	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Chambers County 2027 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.067365	0.074170	0.061786	0.061786	0.052770	0.052770	0.052770	0.055385	0.107326	0.108951	0.055385	0.054796	0.068825
1	0.074850	0.102367	0.085650	0.085650	0.052814	0.052631	0.052756	0.055139	0.098838	0.103650	0.056488	0.056698	0.059543
2	0.059880	0.099585	0.070976	0.070976	0.052718	0.052406	0.052638	0.054991	0.113632	0.111268	0.056702	0.044354	0.047903
3	0.086826	0.089212	0.060009	0.060009	0.052918	0.052454	0.052831	0.055204	0.089706	0.085755	0.057356	0.053668	0.060675
4	0.061377	0.094964	0.061863	0.061863	0.053891	0.053316	0.053743	0.055756	0.101333	0.102451	0.058781	0.064806	0.071965
5	0.047904	0.075538	0.063176	0.063176	0.053660	0.052939	0.053478	0.055275	0.056427	0.056032	0.058720	0.056252	0.057263
6	0.052395	0.065871	0.050587	0.050587	0.050110	0.049293	0.049951	0.052822	0.053431	0.050813	0.056704	0.057525	0.058116
7	0.035928	0.056017	0.041628	0.041628	0.050257	0.049260	0.050171	0.052730	0.069221	0.071436	0.056813	0.063625	0.060032
8	0.019461	0.040881	0.043173	0.043173	0.050525	0.049151	0.050427	0.052628	0.048059	0.048826	0.057311	0.032744	0.030871
9	0.029940	0.032676	0.032592	0.032592	0.046163	0.044413	0.045842	0.048878	0.017683	0.017043	0.054314	0.021855	0.019997
10	0.055389	0.027773	0.027495	0.027495	0.061404	0.067579	0.064781	0.025119	0.017940	0.016190	0.014982	0.028546	0.027428
11	0.055389	0.040834	0.045876	0.045876	0.056161	0.062912	0.056092	0.025148	0.044072	0.041381	0.014903	0.026198	0.024805
12	0.050898	0.039655	0.045181	0.045181	0.047461	0.050457	0.052138	0.029484	0.028590	0.027061	0.014741	0.087920	0.078722
13	0.071856	0.028150	0.039002	0.039002	0.042489	0.048150	0.046877	0.025230	0.030257	0.030204	0.013316	0.056383	0.050902
14	0.043413	0.023199	0.032901	0.032901	0.025820	0.034428	0.024850	0.021493	0.023951	0.025697	0.015819	0.048250	0.043087
15	0.034431	0.023152	0.035218	0.035218	0.021687	0.035534	0.024118	0.020881	0.018410	0.019228	0.008020	0.028953	0.024421
16	0.038922	0.016645	0.034600	0.034600	0.018340	0.026744	0.023407	0.014939	0.014718	0.015792	0.014749	0.022498	0.021618
17	0.017964	0.015466	0.034909	0.034909	0.018865	0.032592	0.020340	0.010585	0.013232	0.013489	0.002423	0.018760	0.016864
18	0.011976	0.010798	0.030816	0.030816	0.020074	0.029399	0.024077	0.018568	0.013138	0.013534	0.004155	0.025502	0.023545
19	0.017964	0.010232	0.020853	0.020853	0.019213	0.024981	0.023017	0.015126	0.010719	0.009828	0.015295	0.035354	0.032228
20	0.010479	0.007591	0.017300	0.017300	0.018630	0.016064	0.018740	0.041651	0.009528	0.009369	0.025089	0.027142	0.024374
21	0.019461	0.005847	0.010504	0.010504	0.021810	0.013014	0.016849	0.032722	0.003893	0.004506	0.032878	0.020163	0.018389
22	0.005988	0.004149	0.012975	0.012975	0.012589	0.009118	0.013911	0.026807	0.004563	0.004678	0.024995	0.013407	0.012671
23	0.011976	0.002499	0.010040	0.010040	0.011598	0.008880	0.014318	0.021775	0.002344	0.002323	0.037614	0.012108	0.012375
24	0.001497	0.002310	0.006796	0.006796	0.014297	0.008526	0.009979	0.023111	0.002225	0.002388	0.027548	0.012069	0.011774
25	0.004491	0.001980	0.005329	0.005329	0.012553	0.007427	0.011144	0.020130	0.001247	0.001414	0.025235	0.007491	0.008079
26	0.004491	0.001273	0.003167	0.003167	0.013586	0.006348	0.011734	0.020564	0.001003	0.001073	0.016085	0.005785	0.006273
27	0.000000	0.000754	0.002858	0.002858	0.015041	0.004033	0.009698	0.024014	0.000740	0.000713	0.029126	0.003739	0.003870
28	0.000000	0.000660	0.001699	0.001699	0.008463	0.002432	0.004923	0.018979	0.000677	0.000730	0.044065	0.002912	0.003640
29	0.001497	0.000236	0.001931	0.001931	0.006459	0.001206	0.004341	0.011447	0.000533	0.000653	0.019310	0.002335	0.003493
30	0.005988	0.005517	0.009113	0.009113	0.017635	0.001542	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Fort Bend County 2011 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.056937	0.063854	0.059009	0.059009	0.036180	0.074697	0.043899	0.020412	0.107326	0.108951	0.017572	0.054796	0.068825
1	0.075769	0.085558	0.075577	0.075577	0.039841	0.101513	0.042214	0.015110	0.098838	0.103650	0.002979	0.056698	0.059543
2	0.064587	0.088792	0.063943	0.063943	0.046623	0.104812	0.055843	0.028331	0.113632	0.111268	0.005313	0.044354	0.047903
3	0.068118	0.085781	0.060124	0.060124	0.049281	0.102921	0.059585	0.025227	0.089706	0.085755	0.020619	0.053668	0.060675
4	0.065029	0.094456	0.062762	0.062762	0.052966	0.076456	0.054774	0.076490	0.101333	0.102451	0.035762	0.064806	0.071965
5	0.066500	0.081303	0.063767	0.063767	0.068397	0.072053	0.055227	0.064970	0.056427	0.056032	0.048854	0.056252	0.057263
6	0.056348	0.075357	0.054704	0.054704	0.042648	0.057371	0.050452	0.056933	0.053431	0.050813	0.038874	0.057525	0.058116
7	0.050611	0.060597	0.043556	0.043556	0.042736	0.064267	0.058689	0.049088	0.069221	0.071436	0.060535	0.063625	0.060032
8	0.034133	0.050231	0.043225	0.043225	0.057372	0.070033	0.045203	0.055546	0.048059	0.048826	0.046135	0.032744	0.030871
9	0.026482	0.042140	0.035874	0.035874	0.054751	0.068493	0.055453	0.052116	0.017683	0.017043	0.044240	0.021855	0.019997
10	0.051935	0.033392	0.026745	0.026745	0.065557	0.068653	0.065744	0.057687	0.017940	0.016190	0.029414	0.028546	0.027428
11	0.052082	0.043067	0.045179	0.045179	0.078557	0.049889	0.060342	0.072218	0.044072	0.041381	0.055786	0.026198	0.024805
12	0.058702	0.040085	0.048004	0.048004	0.047578	0.034391	0.034339	0.060105	0.028590	0.027061	0.086656	0.087920	0.078722
13	0.053700	0.030779	0.041205	0.041205	0.039627	0.019471	0.033557	0.038712	0.030257	0.030204	0.039532	0.056383	0.050902
14	0.042960	0.025314	0.033997	0.033997	0.036599	0.009178	0.030650	0.026002	0.023951	0.025697	0.066825	0.048250	0.043087
15	0.026924	0.021278	0.036492	0.036492	0.029292	0.013218	0.027866	0.034289	0.018410	0.019228	0.035417	0.028953	0.024421
16	0.035015	0.017481	0.034450	0.034450	0.030064	0.002472	0.031547	0.039908	0.014718	0.015792	0.039586	0.022498	0.021618
17	0.027218	0.014401	0.034251	0.034251	0.023718	0.004862	0.016693	0.025686	0.013232	0.013489	0.041853	0.018760	0.016864
18	0.018685	0.011207	0.030134	0.030134	0.021178	0.000730	0.020301	0.020470	0.013138	0.013534	0.025183	0.025502	0.023545
19	0.012358	0.009129	0.022904	0.022904	0.013178	0.001112	0.018896	0.016540	0.010719	0.009828	0.024551	0.035354	0.032228
20	0.009710	0.006637	0.017661	0.017661	0.011799	0.000936	0.024538	0.021137	0.009528	0.009369	0.016394	0.027142	0.024374
21	0.008092	0.004649	0.012771	0.012771	0.017000	0.001181	0.026242	0.024395	0.003893	0.004506	0.025289	0.020163	0.018389
22	0.005002	0.003228	0.011270	0.011270	0.021289	0.000616	0.013673	0.017998	0.004563	0.004678	0.031470	0.013407	0.012671
23	0.003531	0.001920	0.007771	0.007771	0.013982	0.000249	0.014528	0.019271	0.002344	0.002323	0.028159	0.012108	0.012375
24	0.004561	0.001445	0.006546	0.006546	0.009457	0.000070	0.013551	0.017751	0.002225	0.002388	0.025783	0.012069	0.011774
25	0.002207	0.001124	0.006270	0.006270	0.007992	0.000024	0.010508	0.012854	0.001247	0.001414	0.015597	0.007491	0.008079
26	0.002354	0.000856	0.003709	0.003709	0.008237	0.000050	0.007903	0.012188	0.001003	0.001073	0.016256	0.005785	0.006273
27	0.001913	0.000672	0.003002	0.003002	0.006363	0.000037	0.006810	0.010137	0.000740	0.000713	0.015723	0.003739	0.003870
28	0.000883	0.000565	0.002417	0.002417	0.005349	0.000027	0.005974	0.008018	0.000677	0.000730	0.014339	0.002912	0.003640
29	0.000441	0.000482	0.002031	0.002031	0.004757	0.000020	0.004936	0.006995	0.000533	0.000653	0.014229	0.002335	0.003493
30	0.017213	0.004221	0.010652	0.010652	0.017635	0.000198	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Fort Bend County 2017 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.056937	0.063854	0.059009	0.059009	0.078824	0.091142	0.083978	0.031614	0.107326	0.108951	0.016664	0.054796	0.068825
1	0.075769	0.085558	0.075577	0.075577	0.075667	0.090093	0.076580	0.032820	0.098838	0.103650	0.017093	0.056698	0.059543
2	0.064587	0.088792	0.063943	0.063943	0.067199	0.077034	0.075099	0.039904	0.113632	0.111268	0.017428	0.044354	0.047903
3	0.068118	0.085781	0.060124	0.060124	0.063959	0.079629	0.072132	0.035734	0.089706	0.085755	0.016351	0.053668	0.060675
4	0.065029	0.094456	0.062762	0.062762	0.041394	0.062045	0.040955	0.031878	0.101333	0.102451	0.020170	0.064806	0.071965
5	0.066500	0.081303	0.063767	0.063767	0.036596	0.068674	0.042028	0.032138	0.056427	0.056032	0.010539	0.056252	0.057263
6	0.056348	0.075357	0.054704	0.054704	0.032532	0.055132	0.043047	0.023869	0.053431	0.050813	0.019997	0.057525	0.058116
7	0.050611	0.060597	0.043556	0.043556	0.035230	0.072004	0.039560	0.017559	0.069221	0.071436	0.003389	0.063625	0.060032
8	0.034133	0.050231	0.043225	0.043225	0.039392	0.069145	0.049382	0.031958	0.048059	0.048826	0.005994	0.032744	0.030871
9	0.026482	0.042140	0.035874	0.035874	0.039680	0.062851	0.049899	0.027028	0.017683	0.017043	0.022758	0.021855	0.019997
10	0.051935	0.033392	0.026745	0.026745	0.041020	0.044016	0.043545	0.078002	0.017940	0.016190	0.038819	0.028546	0.027428
11	0.052082	0.043067	0.045179	0.045179	0.050566	0.038149	0.041402	0.063658	0.044072	0.041381	0.052497	0.026198	0.024805
12	0.058702	0.040085	0.048004	0.048004	0.030779	0.028742	0.036224	0.054189	0.028590	0.027061	0.041177	0.087920	0.078722
13	0.053700	0.030779	0.041205	0.041205	0.029860	0.029906	0.039417	0.045716	0.030257	0.030204	0.063961	0.056383	0.050902
14	0.042960	0.025314	0.033997	0.033997	0.038819	0.030838	0.029111	0.050432	0.023951	0.025697	0.048354	0.048250	0.043087
15	0.026924	0.021278	0.036492	0.036492	0.035967	0.028980	0.034482	0.045640	0.018410	0.019228	0.045680	0.028953	0.024421
16	0.035015	0.017481	0.034450	0.034450	0.041037	0.026572	0.038448	0.048454	0.014718	0.015792	0.030061	0.022498	0.021618
17	0.027218	0.014401	0.034251	0.034251	0.047968	0.018212	0.033726	0.058821	0.013232	0.013489	0.056177	0.018760	0.016864
18	0.018685	0.011207	0.030134	0.030134	0.028106	0.011607	0.017894	0.047873	0.013138	0.013534	0.087043	0.025502	0.023545
19	0.012358	0.009129	0.022904	0.022904	0.022635	0.006198	0.016732	0.030019	0.010719	0.009828	0.039384	0.035354	0.032228
20	0.009710	0.006637	0.017661	0.017661	0.020051	0.002680	0.014288	0.019410	0.009528	0.009369	0.065558	0.027142	0.024374
21	0.008092	0.004649	0.012771	0.012771	0.015338	0.003551	0.012169	0.024501	0.003893	0.004506	0.034386	0.020163	0.018389
22	0.005002	0.003228	0.011270	0.011270	0.015262	0.000636	0.013276	0.027421	0.004563	0.004678	0.037837	0.013407	0.012671
23	0.003531	0.001920	0.007771	0.007771	0.011438	0.001134	0.006577	0.016877	0.002344	0.002323	0.039588	0.012108	0.012375
24	0.004561	0.001445	0.006546	0.006546	0.009950	0.000160	0.007616	0.013002	0.002225	0.002388	0.023454	0.012069	0.011774
25	0.002207	0.001124	0.006270	0.006270	0.006052	0.000234	0.006794	0.010264	0.001247	0.001414	0.022808	0.007491	0.008079
26	0.002354	0.000856	0.003709	0.003709	0.005200	0.000182	0.008420	0.012742	0.001003	0.001073	0.015103	0.005785	0.006273
27	0.001913	0.000672	0.003002	0.003002	0.007295	0.000215	0.008562	0.014199	0.000740	0.000713	0.022934	0.003739	0.003870
28	0.000883	0.000565	0.002417	0.002417	0.008928	0.000108	0.004271	0.010231	0.000677	0.000730	0.028466	0.002912	0.003640
29	0.000441	0.000482	0.002031	0.002031	0.005620	0.000040	0.004325	0.010633	0.000533	0.000653	0.025257	0.002335	0.003493
30	0.017213	0.004221	0.010652	0.010652	0.017635	0.000091	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Fort Bend County 2018 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.056937	0.063854	0.059009	0.059009	0.056764	0.056764	0.056764	0.059441	0.107326	0.108951	0.059441	0.054796	0.068825
1	0.075769	0.085558	0.075577	0.075577	0.078327	0.090363	0.083431	0.031402	0.098838	0.103650	0.016783	0.056698	0.059543
2	0.064587	0.088792	0.063943	0.063943	0.075191	0.089323	0.076081	0.032600	0.113632	0.111268	0.017214	0.044354	0.047903
3	0.068118	0.085781	0.060124	0.060124	0.066776	0.076375	0.074609	0.039636	0.089706	0.085755	0.017551	0.053668	0.060675
4	0.065029	0.094456	0.062762	0.062762	0.063556	0.078948	0.071662	0.035495	0.101333	0.102451	0.016467	0.064806	0.071965
5	0.066500	0.081303	0.063767	0.063767	0.040595	0.060250	0.040093	0.031371	0.056427	0.056032	0.020168	0.056252	0.057263
6	0.056348	0.075357	0.054704	0.054704	0.035413	0.065287	0.040533	0.031332	0.053431	0.050813	0.010463	0.057525	0.058116
7	0.050611	0.060597	0.043556	0.043556	0.031480	0.052413	0.041516	0.023270	0.069221	0.071436	0.019852	0.063625	0.060032
8	0.034133	0.050231	0.043225	0.043225	0.033634	0.066986	0.037578	0.016956	0.048059	0.048826	0.003340	0.032744	0.030871
9	0.026482	0.042140	0.035874	0.035874	0.037606	0.064326	0.046908	0.030862	0.017683	0.017043	0.005908	0.021855	0.019997
10	0.051935	0.033392	0.026745	0.026745	0.037881	0.058471	0.047399	0.026101	0.017940	0.016190	0.022431	0.028546	0.027428
11	0.052082	0.043067	0.045179	0.045179	0.038627	0.040052	0.040731	0.074609	0.044072	0.041381	0.037983	0.026198	0.024805
12	0.058702	0.040085	0.048004	0.048004	0.047616	0.034712	0.038727	0.060889	0.028590	0.027061	0.051366	0.087920	0.078722
13	0.053700	0.030779	0.041205	0.041205	0.028583	0.025567	0.033357	0.051333	0.030257	0.030204	0.039996	0.056383	0.050902
14	0.042960	0.025314	0.033997	0.033997	0.027729	0.026602	0.036297	0.043307	0.023951	0.025697	0.062126	0.048250	0.043087
15	0.026924	0.021278	0.036492	0.036492	0.036049	0.027432	0.026806	0.047774	0.018410	0.019228	0.046967	0.028953	0.024421
16	0.035015	0.017481	0.034450	0.034450	0.032933	0.025188	0.031252	0.042815	0.014718	0.015792	0.044042	0.022498	0.021618
17	0.027218	0.014401	0.034251	0.034251	0.037575	0.023095	0.034847	0.045455	0.013232	0.013489	0.028983	0.018760	0.016864
18	0.018685	0.011207	0.030134	0.030134	0.043298	0.015458	0.030076	0.054639	0.013138	0.013534	0.053761	0.025502	0.023545
19	0.012358	0.009129	0.022904	0.022904	0.025369	0.009852	0.015958	0.044470	0.010719	0.009828	0.083300	0.035354	0.032228
20	0.009710	0.006637	0.017661	0.017661	0.020137	0.005134	0.014678	0.027609	0.009528	0.009369	0.037408	0.027142	0.024374
21	0.008092	0.004649	0.012771	0.012771	0.017838	0.002220	0.012535	0.017851	0.003893	0.004506	0.062269	0.020163	0.018389
22	0.005002	0.003228	0.011270	0.011270	0.013645	0.002941	0.010676	0.022533	0.004563	0.004678	0.032661	0.013407	0.012671
23	0.003531	0.001920	0.007771	0.007771	0.013379	0.000514	0.011454	0.024967	0.002344	0.002323	0.035668	0.012108	0.012375
24	0.004561	0.001445	0.006546	0.006546	0.010027	0.000916	0.005674	0.015367	0.002225	0.002388	0.037319	0.012069	0.011774
25	0.002207	0.001124	0.006270	0.006270	0.008723	0.000129	0.006571	0.011838	0.001247	0.001414	0.022110	0.007491	0.008079
26	0.002354	0.000856	0.003709	0.003709	0.005227	0.000184	0.005762	0.009251	0.001003	0.001073	0.021337	0.005785	0.006273
27	0.001913	0.000672	0.003002	0.003002	0.004490	0.000144	0.007142	0.011484	0.000740	0.000713	0.014129	0.003739	0.003870
28	0.000883	0.000565	0.002417	0.002417	0.006300	0.000169	0.007262	0.012798	0.000677	0.000730	0.021455	0.002912	0.003640
29	0.000441	0.000482	0.002031	0.002031	0.007594	0.000083	0.003561	0.009127	0.000533	0.000653	0.026427	0.002335	0.003493
30	0.017213	0.004221	0.010652	0.010652	0.017635	0.000101	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Fort Bend County 2020 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.056937	0.063854	0.059009	0.059009	0.056623	0.056623	0.056623	0.059505	0.107326	0.108951	0.059505	0.054796	0.068825
1	0.075769	0.085558	0.075577	0.075577	0.058906	0.058781	0.059000	0.060992	0.098838	0.103650	0.061446	0.056698	0.059543
2	0.064587	0.088792	0.063943	0.063943	0.055787	0.055441	0.055725	0.058218	0.113632	0.111268	0.059616	0.044354	0.047903
3	0.068118	0.085781	0.060124	0.060124	0.076979	0.088257	0.081903	0.030756	0.089706	0.085755	0.016832	0.053668	0.060675
4	0.065029	0.094456	0.062762	0.062762	0.073896	0.087241	0.074688	0.031930	0.101333	0.102451	0.017265	0.064806	0.071965
5	0.066500	0.081303	0.063767	0.063767	0.064800	0.073271	0.072235	0.038481	0.056427	0.056032	0.017480	0.056252	0.057263
6	0.056348	0.075357	0.054704	0.054704	0.060109	0.072950	0.067439	0.033841	0.053431	0.050813	0.016168	0.057525	0.058116
7	0.050611	0.060597	0.043556	0.043556	0.037895	0.054587	0.037185	0.029629	0.069221	0.071436	0.019658	0.063625	0.060032
8	0.034133	0.050231	0.043225	0.043225	0.032631	0.058063	0.037061	0.029329	0.048059	0.048826	0.010126	0.032744	0.030871
9	0.026482	0.042140	0.035874	0.035874	0.028626	0.045687	0.037403	0.021577	0.017683	0.017043	0.019072	0.021855	0.019997
10	0.051935	0.033392	0.026745	0.026745	0.030584	0.058389	0.033855	0.015723	0.017940	0.016190	0.003209	0.028546	0.027428
11	0.052082	0.043067	0.045179	0.045179	0.033749	0.055020	0.041655	0.028360	0.044072	0.041381	0.005636	0.026198	0.024805
12	0.058702	0.040085	0.048004	0.048004	0.033542	0.048997	0.041464	0.023756	0.028590	0.027061	0.021238	0.087920	0.078722
13	0.053700	0.030779	0.041205	0.041205	0.033749	0.032921	0.035112	0.067292	0.030257	0.030204	0.035704	0.056383	0.050902
14	0.042960	0.025314	0.033997	0.033997	0.041041	0.027942	0.032880	0.054391	0.023951	0.025697	0.047926	0.048250	0.043087
15	0.026924	0.021278	0.036492	0.036492	0.024637	0.020580	0.028321	0.045855	0.018410	0.019228	0.037318	0.028953	0.024421
16	0.035015	0.017481	0.034450	0.034450	0.023580	0.020997	0.030362	0.038331	0.014718	0.015792	0.057546	0.022498	0.021618
17	0.027218	0.014401	0.034251	0.034251	0.030235	0.021194	0.022079	0.041875	0.013232	0.013489	0.043179	0.018760	0.016864
18	0.018685	0.011207	0.030134	0.030134	0.027245	0.019074	0.025355	0.037181	0.013138	0.013534	0.040195	0.025502	0.023545
19	0.012358	0.009129	0.022904	0.022904	0.030654	0.017111	0.027831	0.039087	0.010719	0.009828	0.026252	0.035354	0.032228
20	0.009710	0.006637	0.017661	0.017661	0.034835	0.011221	0.023655	0.046548	0.009528	0.009369	0.048337	0.027142	0.024374
21	0.008092	0.004649	0.012771	0.012771	0.020123	0.006993	0.012353	0.037509	0.003893	0.004506	0.074328	0.020163	0.018389
22	0.005002	0.003228	0.011270	0.011270	0.015973	0.003645	0.011362	0.023287	0.004563	0.004678	0.033379	0.013407	0.012671
23	0.003531	0.001920	0.007771	0.007771	0.013951	0.001543	0.009553	0.014916	0.002344	0.002323	0.055151	0.012108	0.012375
24	0.004561	0.001445	0.006546	0.006546	0.010520	0.001999	0.008005	0.018640	0.002225	0.002388	0.028706	0.012069	0.011774
25	0.002207	0.001124	0.006270	0.006270	0.010315	0.000349	0.008588	0.020653	0.001247	0.001414	0.031349	0.007491	0.008079
26	0.002354	0.000856	0.003709	0.003709	0.007620	0.000609	0.004188	0.012591	0.001003	0.001073	0.032556	0.005785	0.006273
27	0.001913	0.000672	0.003002	0.003002	0.006533	0.000084	0.004770	0.009602	0.000740	0.000713	0.019139	0.003739	0.003870
28	0.000883	0.000565	0.002417	0.002417	0.003915	0.000120	0.004184	0.007503	0.000677	0.000730	0.018470	0.002912	0.003640
29	0.000441	0.000482	0.002031	0.002031	0.003315	0.000091	0.005102	0.009226	0.000533	0.000653	0.012139	0.002335	0.003493
30	0.017213	0.004221	0.010652	0.010652	0.017635	0.000219	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Fort Bend County 2023 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.056937	0.063854	0.059009	0.059009	0.055916	0.055916	0.055916	0.058180	0.107326	0.108951	0.058180	0.054796	0.068825
1	0.075769	0.085558	0.075577	0.075577	0.056272	0.056177	0.056259	0.058179	0.098838	0.103650	0.058578	0.056698	0.059543
2	0.064587	0.088792	0.063943	0.063943	0.053703	0.053595	0.053754	0.056574	0.113632	0.111268	0.057461	0.044354	0.047903
3	0.068118	0.085781	0.060124	0.060124	0.055079	0.054952	0.055275	0.057472	0.089706	0.085755	0.058467	0.053668	0.060675
4	0.065029	0.094456	0.062762	0.062762	0.057299	0.057046	0.057596	0.058908	0.101333	0.102451	0.060375	0.064806	0.071965
5	0.066500	0.081303	0.063767	0.063767	0.053587	0.052974	0.053667	0.055701	0.056427	0.056032	0.058115	0.056252	0.057263
6	0.056348	0.075357	0.054704	0.054704	0.072106	0.081694	0.076767	0.028881	0.053431	0.050813	0.016156	0.057525	0.058116
7	0.050611	0.060597	0.043556	0.043556	0.067500	0.078131	0.068119	0.029440	0.069221	0.071436	0.016327	0.063625	0.060032
8	0.034133	0.050231	0.043225	0.043225	0.057694	0.063477	0.064077	0.034826	0.048059	0.048826	0.016279	0.032744	0.030871
9	0.026482	0.042140	0.035874	0.035874	0.052840	0.062167	0.059003	0.030340	0.017683	0.017043	0.014941	0.021855	0.019997
10	0.051935	0.033392	0.026745	0.026745	0.032885	0.045715	0.032079	0.026323	0.017940	0.016190	0.018033	0.028546	0.027428
11	0.052082	0.043067	0.045179	0.045179	0.027950	0.047838	0.031525	0.025805	0.044072	0.041381	0.009215	0.026198	0.024805
12	0.058702	0.040085	0.048004	0.048004	0.024205	0.037017	0.031373	0.018806	0.028590	0.027061	0.017221	0.087920	0.078722
13	0.053700	0.030779	0.041205	0.041205	0.025189	0.045712	0.027598	0.013446	0.030257	0.030204	0.002852	0.056383	0.050902
14	0.042960	0.025314	0.033997	0.033997	0.027435	0.042348	0.033477	0.024021	0.023951	0.025697	0.004971	0.048250	0.043087
15	0.026924	0.021278	0.036492	0.036492	0.026908	0.037037	0.032845	0.019936	0.018410	0.019228	0.018594	0.028953	0.024421
16	0.035015	0.017481	0.034450	0.034450	0.026714	0.024469	0.027413	0.055915	0.014718	0.015792	0.031004	0.022498	0.021618
17	0.027218	0.014401	0.034251	0.034251	0.032058	0.020412	0.025303	0.044760	0.013232	0.013489	0.041292	0.018760	0.016864
18	0.018685	0.011207	0.030134	0.030134	0.018731	0.014509	0.021163	0.037012	0.013138	0.013534	0.031647	0.025502	0.023545
19	0.012358	0.009129	0.022904	0.022904	0.017689	0.014544	0.022359	0.030639	0.010719	0.009828	0.048417	0.035354	0.032228
20	0.009710	0.006637	0.017661	0.017661	0.022068	0.014159	0.015781	0.032824	0.009528	0.009369	0.035754	0.027142	0.024374
21	0.008092	0.004649	0.012771	0.012771	0.019618	0.012516	0.017856	0.028859	0.003893	0.004506	0.033019	0.020163	0.018389
22	0.005002	0.003228	0.011270	0.011270	0.021770	0.011016	0.019305	0.030050	0.004563	0.004678	0.021400	0.013407	0.012671
23	0.003531	0.001920	0.007771	0.007771	0.024396	0.007096	0.016162	0.035423	0.002344	0.002323	0.039074	0.012108	0.012375
24	0.004561	0.001445	0.006546	0.006546	0.013900	0.004343	0.008313	0.028262	0.002225	0.002388	0.059603	0.012069	0.011774
25	0.002207	0.001124	0.006270	0.006270	0.010880	0.002220	0.007530	0.017378	0.001247	0.001414	0.026560	0.007491	0.008079
26	0.002354	0.000856	0.003709	0.003709	0.009369	0.000923	0.006234	0.011017	0.001003	0.001073	0.043513	0.005785	0.006273
27	0.001913	0.000672	0.003002	0.003002	0.006966	0.001173	0.005145	0.013629	0.000740	0.000713	0.022466	0.003739	0.003870
28	0.000883	0.000565	0.002417	0.002417	0.006734	0.000201	0.005435	0.014955	0.000677	0.000730	0.024344	0.002912	0.003640
29	0.000441	0.000482	0.002031	0.002031	0.004904	0.000344	0.002609	0.009023	0.000533	0.000653	0.025065	0.002335	0.003493
30	0.017213	0.004221	0.010652	0.010652	0.017635	0.000280	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Fort Bend County 2026 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.056937	0.063854	0.059009	0.059009	0.053311	0.053311	0.053311	0.055878	0.107326	0.108951	0.055878	0.054796	0.068825
1	0.075769	0.085558	0.075577	0.075577	0.053213	0.053082	0.053192	0.055727	0.098838	0.103650	0.056089	0.056698	0.059543
2	0.064587	0.088792	0.063943	0.063943	0.053415	0.053131	0.053387	0.055943	0.113632	0.111268	0.056737	0.044354	0.047903
3	0.068118	0.085781	0.060124	0.060124	0.054397	0.054004	0.054308	0.056503	0.089706	0.085755	0.058147	0.053668	0.060675
4	0.065029	0.094456	0.062762	0.062762	0.054744	0.054257	0.054641	0.056502	0.101333	0.102451	0.058545	0.064806	0.071965
5	0.066500	0.081303	0.063767	0.063767	0.051675	0.051124	0.051612	0.054469	0.056427	0.056032	0.056986	0.056252	0.057263
6	0.056348	0.075357	0.054704	0.054704	0.051827	0.051090	0.051839	0.054374	0.053431	0.050813	0.057096	0.057525	0.058116
7	0.050611	0.060597	0.043556	0.043556	0.052672	0.051595	0.052695	0.054749	0.069221	0.071436	0.058059	0.063625	0.060032
8	0.034133	0.050231	0.043225	0.043225	0.048125	0.046622	0.047904	0.050848	0.048059	0.048826	0.055022	0.032744	0.030871
9	0.026482	0.042140	0.035874	0.035874	0.064014	0.070939	0.067696	0.026131	0.017683	0.017043	0.015178	0.021855	0.019997
10	0.051935	0.033392	0.026745	0.026745	0.059196	0.066851	0.059289	0.026395	0.017940	0.016190	0.015220	0.028546	0.027428
11	0.052082	0.043067	0.045179	0.045179	0.050025	0.053616	0.055111	0.030946	0.044072	0.041381	0.015055	0.026198	0.024805
12	0.058702	0.040085	0.048004	0.048004	0.045285	0.051800	0.050126	0.026719	0.028590	0.027061	0.013710	0.087920	0.078722
13	0.053700	0.030779	0.041205	0.041205	0.027519	0.037038	0.026572	0.022762	0.030257	0.030204	0.016287	0.056383	0.050902
14	0.042960	0.025314	0.033997	0.033997	0.023114	0.038227	0.025789	0.022114	0.023951	0.025697	0.008257	0.048250	0.043087
15	0.026924	0.021278	0.036492	0.036492	0.019768	0.029133	0.025323	0.015965	0.018410	0.019228	0.015311	0.028953	0.024421
16	0.035015	0.017481	0.034450	0.034450	0.020334	0.035504	0.022005	0.011312	0.014718	0.015792	0.002516	0.022498	0.021618
17	0.027218	0.014401	0.034251	0.034251	0.021884	0.032433	0.026359	0.020025	0.013232	0.013489	0.004349	0.018760	0.016864
18	0.018685	0.011207	0.030134	0.030134	0.020946	0.027559	0.025198	0.016314	0.013138	0.013534	0.016009	0.025502	0.023545
19	0.012358	0.009129	0.022904	0.022904	0.020545	0.017950	0.020764	0.045336	0.010719	0.009828	0.026480	0.035354	0.032228
20	0.009710	0.006637	0.017661	0.017661	0.024052	0.014542	0.018668	0.035616	0.009528	0.009369	0.034700	0.027142	0.024374
21	0.008092	0.004649	0.012771	0.012771	0.013883	0.010189	0.015413	0.029179	0.003893	0.004506	0.026380	0.020163	0.018389
22	0.005002	0.003228	0.011270	0.011270	0.012940	0.010052	0.016058	0.023923	0.004563	0.004678	0.040035	0.013407	0.012671
23	0.003531	0.001920	0.007771	0.007771	0.015951	0.009652	0.011191	0.025391	0.002344	0.002323	0.029321	0.012108	0.012375
24	0.004561	0.001445	0.006546	0.006546	0.014005	0.008408	0.012497	0.022116	0.002225	0.002388	0.026858	0.012069	0.011774
25	0.002207	0.001124	0.006270	0.006270	0.015337	0.007281	0.013322	0.022806	0.001247	0.001414	0.017266	0.007491	0.008079
26	0.002354	0.000856	0.003709	0.003709	0.016979	0.004626	0.011010	0.026631	0.001003	0.001073	0.031264	0.005785	0.006273
27	0.001913	0.000672	0.003002	0.003002	0.009554	0.002789	0.005589	0.021048	0.000740	0.000713	0.047300	0.003739	0.003870
28	0.000883	0.000565	0.002417	0.002417	0.007379	0.001402	0.004990	0.012815	0.000677	0.000730	0.020905	0.002912	0.003640
29	0.000441	0.000482	0.002031	0.002031	0.006276	0.000575	0.004078	0.008047	0.000533	0.000653	0.033963	0.002335	0.003493
30	0.017213	0.004221	0.010652	0.010652	0.017635	0.001218	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Fort Bend County 2027 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.056937	0.063854	0.059009	0.059009	0.052770	0.052770	0.052770	0.055385	0.107326	0.108951	0.055385	0.054796	0.068825
1	0.075769	0.085558	0.075577	0.075577	0.052814	0.052631	0.052756	0.055139	0.098838	0.103650	0.056488	0.056698	0.059543
2	0.064587	0.088792	0.063943	0.063943	0.052718	0.052406	0.052638	0.054991	0.113632	0.111268	0.056702	0.044354	0.047903
3	0.068118	0.085781	0.060124	0.060124	0.052918	0.052454	0.052831	0.055204	0.089706	0.085755	0.057356	0.053668	0.060675
4	0.065029	0.094456	0.062762	0.062762	0.053891	0.053316	0.053743	0.055756	0.101333	0.102451	0.058781	0.064806	0.071965
5	0.066500	0.081303	0.063767	0.063767	0.053660	0.052939	0.053478	0.055275	0.056427	0.056032	0.058720	0.056252	0.057263
6	0.056348	0.075357	0.054704	0.054704	0.050110	0.049293	0.049951	0.052822	0.053431	0.050813	0.056704	0.057525	0.058116
7	0.050611	0.060597	0.043556	0.043556	0.050257	0.049260	0.050171	0.052730	0.069221	0.071436	0.056813	0.063625	0.060032
8	0.034133	0.050231	0.043225	0.043225	0.050525	0.049151	0.050427	0.052628	0.048059	0.048826	0.057311	0.032744	0.030871
9	0.026482	0.042140	0.035874	0.035874	0.046163	0.044413	0.045842	0.048878	0.017683	0.017043	0.054314	0.021855	0.019997
10	0.051935	0.033392	0.026745	0.026745	0.061404	0.067579	0.064781	0.025119	0.017940	0.016190	0.014982	0.028546	0.027428
11	0.052082	0.043067	0.045179	0.045179	0.056161	0.062912	0.056092	0.025148	0.044072	0.041381	0.014903	0.026198	0.024805
12	0.058702	0.040085	0.048004	0.048004	0.047461	0.050457	0.052138	0.029484	0.028590	0.027061	0.014741	0.087920	0.078722
13	0.053700	0.030779	0.041205	0.041205	0.042489	0.048150	0.046877	0.025230	0.030257	0.030204	0.013316	0.056383	0.050902
14	0.042960	0.025314	0.033997	0.033997	0.025820	0.034428	0.024850	0.021493	0.023951	0.025697	0.015819	0.048250	0.043087
15	0.026924	0.021278	0.036492	0.036492	0.021687	0.035534	0.024118	0.020881	0.018410	0.019228	0.008020	0.028953	0.024421
16	0.035015	0.017481	0.034450	0.034450	0.018340	0.026744	0.023407	0.014939	0.014718	0.015792	0.014749	0.022498	0.021618
17	0.027218	0.014401	0.034251	0.034251	0.018865	0.032592	0.020340	0.010585	0.013232	0.013489	0.002423	0.018760	0.016864
18	0.018685	0.011207	0.030134	0.030134	0.020074	0.029399	0.024077	0.018568	0.013138	0.013534	0.004155	0.025502	0.023545
19	0.012358	0.009129	0.022904	0.022904	0.019213	0.024981	0.023017	0.015126	0.010719	0.009828	0.015295	0.035354	0.032228
20	0.009710	0.006637	0.017661	0.017661	0.018630	0.016064	0.018740	0.041651	0.009528	0.009369	0.025089	0.027142	0.024374
21	0.008092	0.004649	0.012771	0.012771	0.021810	0.013014	0.016849	0.032722	0.003893	0.004506	0.032878	0.020163	0.018389
22	0.005002	0.003228	0.011270	0.011270	0.012589	0.009118	0.013911	0.026807	0.004563	0.004678	0.024995	0.013407	0.012671
23	0.003531	0.001920	0.007771	0.007771	0.011598	0.008880	0.014318	0.021775	0.002344	0.002323	0.037614	0.012108	0.012375
24	0.004561	0.001445	0.006546	0.006546	0.014297	0.008526	0.009979	0.023111	0.002225	0.002388	0.027548	0.012069	0.011774
25	0.002207	0.001124	0.006270	0.006270	0.012553	0.007427	0.011144	0.020130	0.001247	0.001414	0.025235	0.007491	0.008079
26	0.002354	0.000856	0.003709	0.003709	0.013586	0.006348	0.011734	0.020564	0.001003	0.001073	0.016085	0.005785	0.006273
27	0.001913	0.000672	0.003002	0.003002	0.015041	0.004033	0.009698	0.024014	0.000740	0.000713	0.029126	0.003739	0.003870
28	0.000883	0.000565	0.002417	0.002417	0.008463	0.002432	0.004923	0.018979	0.000677	0.000730	0.044065	0.002912	0.003640
29	0.000441	0.000482	0.002031	0.002031	0.006459	0.001206	0.004341	0.011447	0.000533	0.000653	0.019310	0.002335	0.003493
30	0.017213	0.004221	0.010652	0.010652	0.017635	0.001542	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Galveston County 2011 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.059392	0.059266	0.050818	0.050818	0.036180	0.074697	0.043899	0.020412	0.107326	0.108951	0.017572	0.054796	0.068825
1	0.068727	0.085363	0.072307	0.072307	0.039841	0.101513	0.042214	0.015110	0.098838	0.103650	0.002979	0.056698	0.059543
2	0.061323	0.090480	0.063375	0.063375	0.046623	0.104812	0.055843	0.028331	0.113632	0.111268	0.005313	0.044354	0.047903
3	0.059231	0.081649	0.057840	0.057840	0.049281	0.102921	0.059585	0.025227	0.089706	0.085755	0.020619	0.053668	0.060675
4	0.056333	0.088141	0.058295	0.058295	0.052966	0.076456	0.054774	0.076490	0.101333	0.102451	0.035762	0.064806	0.071965
5	0.053275	0.073997	0.061828	0.061828	0.068397	0.072053	0.055227	0.064970	0.056427	0.056032	0.048854	0.056252	0.057263
6	0.050056	0.068880	0.054079	0.054079	0.042648	0.057371	0.050452	0.056933	0.053431	0.050813	0.038874	0.057525	0.058116
7	0.039433	0.055310	0.041552	0.041552	0.042736	0.064267	0.058689	0.049088	0.069221	0.071436	0.060535	0.063625	0.060032
8	0.028811	0.045595	0.041082	0.041082	0.057372	0.070033	0.045203	0.055546	0.048059	0.048826	0.046135	0.032744	0.030871
9	0.027523	0.038449	0.036639	0.036639	0.054751	0.068493	0.055453	0.052116	0.017683	0.017043	0.044240	0.021855	0.019997
10	0.052953	0.032268	0.028753	0.028753	0.065557	0.068653	0.065744	0.057687	0.017940	0.016190	0.029414	0.028546	0.027428
11	0.051666	0.043966	0.048301	0.048301	0.078557	0.049889	0.060342	0.072218	0.044072	0.041381	0.055786	0.026198	0.024805
12	0.060357	0.042011	0.046799	0.046799	0.047578	0.034391	0.034339	0.060105	0.028590	0.027061	0.086656	0.087920	0.078722
13	0.053114	0.034009	0.042341	0.042341	0.039627	0.019471	0.033557	0.038712	0.030257	0.030204	0.039532	0.056383	0.050902
14	0.047964	0.029856	0.035259	0.035259	0.036599	0.009178	0.030650	0.026002	0.023951	0.025697	0.066825	0.048250	0.043087
15	0.034444	0.025043	0.039141	0.039141	0.029292	0.013218	0.027866	0.034289	0.018410	0.019228	0.035417	0.028953	0.024421
16	0.038468	0.021730	0.036320	0.036320	0.030064	0.002472	0.031547	0.039908	0.014718	0.015792	0.039586	0.022498	0.021618
17	0.033639	0.018405	0.036472	0.036472	0.023718	0.004862	0.016693	0.025686	0.013232	0.013489	0.041853	0.018760	0.016864
18	0.021407	0.014511	0.033378	0.033378	0.021178	0.000730	0.020301	0.020470	0.013138	0.013534	0.025183	0.025502	0.023545
19	0.020924	0.012172	0.024158	0.024158	0.013178	0.001112	0.018896	0.016540	0.010719	0.009828	0.024551	0.035354	0.032228
20	0.013842	0.008949	0.019684	0.019684	0.011799	0.000936	0.024538	0.021137	0.009528	0.009369	0.016394	0.027142	0.024374
21	0.011106	0.006593	0.013285	0.013285	0.017000	0.001181	0.026242	0.024395	0.003893	0.004506	0.025289	0.020163	0.018389
22	0.006921	0.004694	0.012799	0.012799	0.021289	0.000616	0.013673	0.017998	0.004563	0.004678	0.031470	0.013407	0.012671
23	0.009013	0.002880	0.008872	0.008872	0.013982	0.000249	0.014528	0.019271	0.002344	0.002323	0.028159	0.012108	0.012375
24	0.005150	0.002463	0.007507	0.007507	0.009457	0.000070	0.013551	0.017751	0.002225	0.002388	0.025783	0.012069	0.011774
25	0.002897	0.001944	0.006839	0.006839	0.007992	0.000024	0.010508	0.012854	0.001247	0.001414	0.015597	0.007491	0.008079
26	0.004024	0.001392	0.004565	0.004565	0.008237	0.000050	0.007903	0.012188	0.001003	0.001073	0.016256	0.005785	0.006273
27	0.001288	0.001082	0.002881	0.002881	0.006363	0.000037	0.006810	0.010137	0.000740	0.000713	0.015723	0.003739	0.003870
28	0.001449	0.000981	0.002199	0.002199	0.005349	0.000027	0.005974	0.008018	0.000677	0.000730	0.014339	0.002912	0.003640
29	0.002414	0.000800	0.002002	0.002002	0.004757	0.000020	0.004936	0.006995	0.000533	0.000653	0.014229	0.002335	0.003493
30	0.022855	0.007123	0.010631	0.010631	0.017635	0.000198	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Galveston County 2017 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.059392	0.059266	0.050818	0.050818	0.078824	0.091142	0.083978	0.031614	0.107326	0.108951	0.016664	0.054796	0.068825
1	0.068727	0.085363	0.072307	0.072307	0.075667	0.090093	0.076580	0.032820	0.098838	0.103650	0.017093	0.056698	0.059543
2	0.061323	0.090480	0.063375	0.063375	0.067199	0.077034	0.075099	0.039904	0.113632	0.111268	0.017428	0.044354	0.047903
3	0.059231	0.081649	0.057840	0.057840	0.063959	0.079629	0.072132	0.035734	0.089706	0.085755	0.016351	0.053668	0.060675
4	0.056333	0.088141	0.058295	0.058295	0.041394	0.062045	0.040955	0.031878	0.101333	0.102451	0.020170	0.064806	0.071965
5	0.053275	0.073997	0.061828	0.061828	0.036596	0.068674	0.042028	0.032138	0.056427	0.056032	0.010539	0.056252	0.057263
6	0.050056	0.068880	0.054079	0.054079	0.032532	0.055132	0.043047	0.023869	0.053431	0.050813	0.019997	0.057525	0.058116
7	0.039433	0.055310	0.041552	0.041552	0.035230	0.072004	0.039560	0.017559	0.069221	0.071436	0.003389	0.063625	0.060032
8	0.028811	0.045595	0.041082	0.041082	0.039392	0.069145	0.049382	0.031958	0.048059	0.048826	0.005994	0.032744	0.030871
9	0.027523	0.038449	0.036639	0.036639	0.039680	0.062851	0.049899	0.027028	0.017683	0.017043	0.022758	0.021855	0.019997
10	0.052953	0.032268	0.028753	0.028753	0.041020	0.044016	0.043545	0.078002	0.017940	0.016190	0.038819	0.028546	0.027428
11	0.051666	0.043966	0.048301	0.048301	0.050566	0.038149	0.041402	0.063658	0.044072	0.041381	0.052497	0.026198	0.024805
12	0.060357	0.042011	0.046799	0.046799	0.030779	0.028742	0.036224	0.054189	0.028590	0.027061	0.041177	0.087920	0.078722
13	0.053114	0.034009	0.042341	0.042341	0.029860	0.029906	0.039417	0.045716	0.030257	0.030204	0.063961	0.056383	0.050902
14	0.047964	0.029856	0.035259	0.035259	0.038819	0.030838	0.029111	0.050432	0.023951	0.025697	0.048354	0.048250	0.043087
15	0.034444	0.025043	0.039141	0.039141	0.035967	0.028980	0.034482	0.045640	0.018410	0.019228	0.045680	0.028953	0.024421
16	0.038468	0.021730	0.036320	0.036320	0.041037	0.026572	0.038448	0.048454	0.014718	0.015792	0.030061	0.022498	0.021618
17	0.033639	0.018405	0.036472	0.036472	0.047968	0.018212	0.033726	0.058821	0.013232	0.013489	0.056177	0.018760	0.016864
18	0.021407	0.014511	0.033378	0.033378	0.028106	0.011607	0.017894	0.047873	0.013138	0.013534	0.087043	0.025502	0.023545
19	0.020924	0.012172	0.024158	0.024158	0.022635	0.006198	0.016732	0.030019	0.010719	0.009828	0.039384	0.035354	0.032228
20	0.013842	0.008949	0.019684	0.019684	0.020051	0.002680	0.014288	0.019410	0.009528	0.009369	0.065558	0.027142	0.024374
21	0.011106	0.006593	0.013285	0.013285	0.015338	0.003551	0.012169	0.024501	0.003893	0.004506	0.034386	0.020163	0.018389
22	0.006921	0.004694	0.012799	0.012799	0.015262	0.000636	0.013276	0.027421	0.004563	0.004678	0.037837	0.013407	0.012671
23	0.009013	0.002880	0.008872	0.008872	0.011438	0.001134	0.006577	0.016877	0.002344	0.002323	0.039588	0.012108	0.012375
24	0.005150	0.002463	0.007507	0.007507	0.009950	0.000160	0.007616	0.013002	0.002225	0.002388	0.023454	0.012069	0.011774
25	0.002897	0.001944	0.006839	0.006839	0.006052	0.000234	0.006794	0.010264	0.001247	0.001414	0.022808	0.007491	0.008079
26	0.004024	0.001392	0.004565	0.004565	0.005200	0.000182	0.008420	0.012742	0.001003	0.001073	0.015103	0.005785	0.006273
27	0.001288	0.001082	0.002881	0.002881	0.007295	0.000215	0.008562	0.014199	0.000740	0.000713	0.022934	0.003739	0.003870
28	0.001449	0.000981	0.002199	0.002199	0.008928	0.000108	0.004271	0.010231	0.000677	0.000730	0.028466	0.002912	0.003640
29	0.002414	0.000800	0.002002	0.002002	0.005620	0.000040	0.004325	0.010633	0.000533	0.000653	0.025257	0.002335	0.003493
30	0.022855	0.007123	0.010631	0.010631	0.017635	0.000091	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Galveston County 2018 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.059392	0.059266	0.050818	0.050818	0.056764	0.056764	0.056764	0.059441	0.107326	0.108951	0.059441	0.054796	0.068825
1	0.068727	0.085363	0.072307	0.072307	0.078327	0.090363	0.083431	0.031402	0.098838	0.103650	0.016783	0.056698	0.059543
2	0.061323	0.090480	0.063375	0.063375	0.075191	0.089323	0.076081	0.032600	0.113632	0.111268	0.017214	0.044354	0.047903
3	0.059231	0.081649	0.057840	0.057840	0.066776	0.076375	0.074609	0.039636	0.089706	0.085755	0.017551	0.053668	0.060675
4	0.056333	0.088141	0.058295	0.058295	0.063556	0.078948	0.071662	0.035495	0.101333	0.102451	0.016467	0.064806	0.071965
5	0.053275	0.073997	0.061828	0.061828	0.040595	0.060250	0.040093	0.031371	0.056427	0.056032	0.020168	0.056252	0.057263
6	0.050056	0.068880	0.054079	0.054079	0.035413	0.065287	0.040533	0.031332	0.053431	0.050813	0.010463	0.057525	0.058116
7	0.039433	0.055310	0.041552	0.041552	0.031480	0.052413	0.041516	0.023270	0.069221	0.071436	0.019852	0.063625	0.060032
8	0.028811	0.045595	0.041082	0.041082	0.033634	0.066986	0.037578	0.016956	0.048059	0.048826	0.003340	0.032744	0.030871
9	0.027523	0.038449	0.036639	0.036639	0.037606	0.064326	0.046908	0.030862	0.017683	0.017043	0.005908	0.021855	0.019997
10	0.052953	0.032268	0.028753	0.028753	0.037881	0.058471	0.047399	0.026101	0.017940	0.016190	0.022431	0.028546	0.027428
11	0.051666	0.043966	0.048301	0.048301	0.038627	0.040052	0.040731	0.074609	0.044072	0.041381	0.037983	0.026198	0.024805
12	0.060357	0.042011	0.046799	0.046799	0.047616	0.034712	0.038727	0.060889	0.028590	0.027061	0.051366	0.087920	0.078722
13	0.053114	0.034009	0.042341	0.042341	0.028583	0.025567	0.033357	0.051333	0.030257	0.030204	0.039996	0.056383	0.050902
14	0.047964	0.029856	0.035259	0.035259	0.027729	0.026602	0.036297	0.043307	0.023951	0.025697	0.062126	0.048250	0.043087
15	0.034444	0.025043	0.039141	0.039141	0.036049	0.027432	0.026806	0.047774	0.018410	0.019228	0.046967	0.028953	0.024421
16	0.038468	0.021730	0.036320	0.036320	0.032933	0.025188	0.031252	0.042815	0.014718	0.015792	0.044042	0.022498	0.021618
17	0.033639	0.018405	0.036472	0.036472	0.037575	0.023095	0.034847	0.045455	0.013232	0.013489	0.028983	0.018760	0.016864
18	0.021407	0.014511	0.033378	0.033378	0.043298	0.015458	0.030076	0.054639	0.013138	0.013534	0.053761	0.025502	0.023545
19	0.020924	0.012172	0.024158	0.024158	0.025369	0.009852	0.015958	0.044470	0.010719	0.009828	0.083300	0.035354	0.032228
20	0.013842	0.008949	0.019684	0.019684	0.020137	0.005134	0.014678	0.027609	0.009528	0.009369	0.037408	0.027142	0.024374
21	0.011106	0.006593	0.013285	0.013285	0.017838	0.002220	0.012535	0.017851	0.003893	0.004506	0.062269	0.020163	0.018389
22	0.006921	0.004694	0.012799	0.012799	0.013645	0.002941	0.010676	0.022533	0.004563	0.004678	0.032661	0.013407	0.012671
23	0.009013	0.002880	0.008872	0.008872	0.013379	0.000514	0.011454	0.024967	0.002344	0.002323	0.035668	0.012108	0.012375
24	0.005150	0.002463	0.007507	0.007507	0.010027	0.000916	0.005674	0.015367	0.002225	0.002388	0.037319	0.012069	0.011774
25	0.002897	0.001944	0.006839	0.006839	0.008723	0.000129	0.006571	0.011838	0.001247	0.001414	0.022110	0.007491	0.008079
26	0.004024	0.001392	0.004565	0.004565	0.005227	0.000184	0.005762	0.009251	0.001003	0.001073	0.021337	0.005785	0.006273
27	0.001288	0.001082	0.002881	0.002881	0.004490	0.000144	0.007142	0.011484	0.000740	0.000713	0.014129	0.003739	0.003870
28	0.001449	0.000981	0.002199	0.002199	0.006300	0.000169	0.007262	0.012798	0.000677	0.000730	0.021455	0.002912	0.003640
29	0.002414	0.000800	0.002002	0.002002	0.007594	0.000083	0.003561	0.009127	0.000533	0.000653	0.026427	0.002335	0.003493
30	0.022855	0.007123	0.010631	0.010631	0.017635	0.000101	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Galveston County 2020 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.059392	0.059266	0.050818	0.050818	0.056623	0.056623	0.056623	0.059505	0.107326	0.108951	0.059505	0.054796	0.068825
1	0.068727	0.085363	0.072307	0.072307	0.058906	0.058781	0.059000	0.060992	0.098838	0.103650	0.061446	0.056698	0.059543
2	0.061323	0.090480	0.063375	0.063375	0.055787	0.055441	0.055725	0.058218	0.113632	0.111268	0.059616	0.044354	0.047903
3	0.059231	0.081649	0.057840	0.057840	0.076979	0.088257	0.081903	0.030756	0.089706	0.085755	0.016832	0.053668	0.060675
4	0.056333	0.088141	0.058295	0.058295	0.073896	0.087241	0.074688	0.031930	0.101333	0.102451	0.017265	0.064806	0.071965
5	0.053275	0.073997	0.061828	0.061828	0.064800	0.073271	0.072235	0.038481	0.056427	0.056032	0.017480	0.056252	0.057263
6	0.050056	0.068880	0.054079	0.054079	0.060109	0.072950	0.067439	0.033841	0.053431	0.050813	0.016168	0.057525	0.058116
7	0.039433	0.055310	0.041552	0.041552	0.037895	0.054587	0.037185	0.029629	0.069221	0.071436	0.019658	0.063625	0.060032
8	0.028811	0.045595	0.041082	0.041082	0.032631	0.058063	0.037061	0.029329	0.048059	0.048826	0.010126	0.032744	0.030871
9	0.027523	0.038449	0.036639	0.036639	0.028626	0.045687	0.037403	0.021577	0.017683	0.017043	0.019072	0.021855	0.019997
10	0.052953	0.032268	0.028753	0.028753	0.030584	0.058389	0.033855	0.015723	0.017940	0.016190	0.003209	0.028546	0.027428
11	0.051666	0.043966	0.048301	0.048301	0.033749	0.055020	0.041655	0.028360	0.044072	0.041381	0.005636	0.026198	0.024805
12	0.060357	0.042011	0.046799	0.046799	0.033542	0.048997	0.041464	0.023756	0.028590	0.027061	0.021238	0.087920	0.078722
13	0.053114	0.034009	0.042341	0.042341	0.033749	0.032921	0.035112	0.067292	0.030257	0.030204	0.035704	0.056383	0.050902
14	0.047964	0.029856	0.035259	0.035259	0.041041	0.027942	0.032880	0.054391	0.023951	0.025697	0.047926	0.048250	0.043087
15	0.034444	0.025043	0.039141	0.039141	0.024637	0.020580	0.028321	0.045855	0.018410	0.019228	0.037318	0.028953	0.024421
16	0.038468	0.021730	0.036320	0.036320	0.023580	0.020997	0.030362	0.038331	0.014718	0.015792	0.057546	0.022498	0.021618
17	0.033639	0.018405	0.036472	0.036472	0.030235	0.021194	0.022079	0.041875	0.013232	0.013489	0.043179	0.018760	0.016864
18	0.021407	0.014511	0.033378	0.033378	0.027245	0.019074	0.025355	0.037181	0.013138	0.013534	0.040195	0.025502	0.023545
19	0.020924	0.012172	0.024158	0.024158	0.030654	0.017111	0.027831	0.039087	0.010719	0.009828	0.026252	0.035354	0.032228
20	0.013842	0.008949	0.019684	0.019684	0.034835	0.011221	0.023655	0.046548	0.009528	0.009369	0.048337	0.027142	0.024374
21	0.011106	0.006593	0.013285	0.013285	0.020123	0.006993	0.012353	0.037509	0.003893	0.004506	0.074328	0.020163	0.018389
22	0.006921	0.004694	0.012799	0.012799	0.015973	0.003645	0.011362	0.023287	0.004563	0.004678	0.033379	0.013407	0.012671
23	0.009013	0.002880	0.008872	0.008872	0.013951	0.001543	0.009553	0.014916	0.002344	0.002323	0.055151	0.012108	0.012375
24	0.005150	0.002463	0.007507	0.007507	0.010520	0.001999	0.008005	0.018640	0.002225	0.002388	0.028706	0.012069	0.011774
25	0.002897	0.001944	0.006839	0.006839	0.010315	0.000349	0.008588	0.020653	0.001247	0.001414	0.031349	0.007491	0.008079
26	0.004024	0.001392	0.004565	0.004565	0.007620	0.000609	0.004188	0.012591	0.001003	0.001073	0.032556	0.005785	0.006273
27	0.001288	0.001082	0.002881	0.002881	0.006533	0.000084	0.004770	0.009602	0.000740	0.000713	0.019139	0.003739	0.003870
28	0.001449	0.000981	0.002199	0.002199	0.003915	0.000120	0.004184	0.007503	0.000677	0.000730	0.018470	0.002912	0.003640
29	0.002414	0.000800	0.002002	0.002002	0.003315	0.000091	0.005102	0.009226	0.000533	0.000653	0.012139	0.002335	0.003493
30	0.022855	0.007123	0.010631	0.010631	0.017635	0.000219	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Galveston County 2023 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.059392	0.059266	0.050818	0.050818	0.055916	0.055916	0.055916	0.058180	0.107326	0.108951	0.058180	0.054796	0.068825
1	0.068727	0.085363	0.072307	0.072307	0.056272	0.056177	0.056259	0.058179	0.098838	0.103650	0.058578	0.056698	0.059543
2	0.061323	0.090480	0.063375	0.063375	0.053703	0.053595	0.053754	0.056574	0.113632	0.111268	0.057461	0.044354	0.047903
3	0.059231	0.081649	0.057840	0.057840	0.055079	0.054952	0.055275	0.057472	0.089706	0.085755	0.058467	0.053668	0.060675
4	0.056333	0.088141	0.058295	0.058295	0.057299	0.057046	0.057596	0.058908	0.101333	0.102451	0.060375	0.064806	0.071965
5	0.053275	0.073997	0.061828	0.061828	0.053587	0.052974	0.053667	0.055701	0.056427	0.056032	0.058115	0.056252	0.057263
6	0.050056	0.068880	0.054079	0.054079	0.072106	0.081694	0.076767	0.028881	0.053431	0.050813	0.016156	0.057525	0.058116
7	0.039433	0.055310	0.041552	0.041552	0.067500	0.078131	0.068119	0.029440	0.069221	0.071436	0.016327	0.063625	0.060032
8	0.028811	0.045595	0.041082	0.041082	0.057694	0.063477	0.064077	0.034826	0.048059	0.048826	0.016279	0.032744	0.030871
9	0.027523	0.038449	0.036639	0.036639	0.052840	0.062167	0.059003	0.030340	0.017683	0.017043	0.014941	0.021855	0.019997
10	0.052953	0.032268	0.028753	0.028753	0.032885	0.045715	0.032079	0.026323	0.017940	0.016190	0.018033	0.028546	0.027428
11	0.051666	0.043966	0.048301	0.048301	0.027950	0.047838	0.031525	0.025805	0.044072	0.041381	0.009215	0.026198	0.024805
12	0.060357	0.042011	0.046799	0.046799	0.024205	0.037017	0.031373	0.018806	0.028590	0.027061	0.017221	0.087920	0.078722
13	0.053114	0.034009	0.042341	0.042341	0.025189	0.045712	0.027598	0.013446	0.030257	0.030204	0.002852	0.056383	0.050902
14	0.047964	0.029856	0.035259	0.035259	0.027435	0.042348	0.033477	0.024021	0.023951	0.025697	0.004971	0.048250	0.043087
15	0.034444	0.025043	0.039141	0.039141	0.026908	0.037037	0.032845	0.019936	0.018410	0.019228	0.018594	0.028953	0.024421
16	0.038468	0.021730	0.036320	0.036320	0.026714	0.024469	0.027413	0.055915	0.014718	0.015792	0.031004	0.022498	0.021618
17	0.033639	0.018405	0.036472	0.036472	0.032058	0.020412	0.025303	0.044760	0.013232	0.013489	0.041292	0.018760	0.016864
18	0.021407	0.014511	0.033378	0.033378	0.018731	0.014509	0.021163	0.037012	0.013138	0.013534	0.031647	0.025502	0.023545
19	0.020924	0.012172	0.024158	0.024158	0.017689	0.014544	0.022359	0.030639	0.010719	0.009828	0.048417	0.035354	0.032228
20	0.013842	0.008949	0.019684	0.019684	0.022068	0.014159	0.015781	0.032824	0.009528	0.009369	0.035754	0.027142	0.024374
21	0.011106	0.006593	0.013285	0.013285	0.019618	0.012516	0.017856	0.028859	0.003893	0.004506	0.033019	0.020163	0.018389
22	0.006921	0.004694	0.012799	0.012799	0.021770	0.011016	0.019305	0.030050	0.004563	0.004678	0.021400	0.013407	0.012671
23	0.009013	0.002880	0.008872	0.008872	0.024396	0.007096	0.016162	0.035423	0.002344	0.002323	0.039074	0.012108	0.012375
24	0.005150	0.002463	0.007507	0.007507	0.013900	0.004343	0.008313	0.028262	0.002225	0.002388	0.059603	0.012069	0.011774
25	0.002897	0.001944	0.006839	0.006839	0.010880	0.002220	0.007530	0.017378	0.001247	0.001414	0.026560	0.007491	0.008079
26	0.004024	0.001392	0.004565	0.004565	0.009369	0.000923	0.006234	0.011017	0.001003	0.001073	0.043513	0.005785	0.006273
27	0.001288	0.001082	0.002881	0.002881	0.006966	0.001173	0.005145	0.013629	0.000740	0.000713	0.022466	0.003739	0.003870
28	0.001449	0.000981	0.002199	0.002199	0.006734	0.000201	0.005435	0.014955	0.000677	0.000730	0.024344	0.002912	0.003640
29	0.002414	0.000800	0.002002	0.002002	0.004904	0.000344	0.002609	0.009023	0.000533	0.000653	0.025065	0.002335	0.003493
30	0.022855	0.007123	0.010631	0.010631	0.017635	0.000280	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Galveston County 2026 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.059392	0.059266	0.050818	0.050818	0.053311	0.053311	0.053311	0.055878	0.107326	0.108951	0.055878	0.054796	0.068825
1	0.068727	0.085363	0.072307	0.072307	0.053213	0.053082	0.053192	0.055727	0.098838	0.103650	0.056089	0.056698	0.059543
2	0.061323	0.090480	0.063375	0.063375	0.053415	0.053131	0.053387	0.055943	0.113632	0.111268	0.056737	0.044354	0.047903
3	0.059231	0.081649	0.057840	0.057840	0.054397	0.054004	0.054308	0.056503	0.089706	0.085755	0.058147	0.053668	0.060675
4	0.056333	0.088141	0.058295	0.058295	0.054744	0.054257	0.054641	0.056502	0.101333	0.102451	0.058545	0.064806	0.071965
5	0.053275	0.073997	0.061828	0.061828	0.051675	0.051124	0.051612	0.054469	0.056427	0.056032	0.056986	0.056252	0.057263
6	0.050056	0.068880	0.054079	0.054079	0.051827	0.051090	0.051839	0.054374	0.053431	0.050813	0.057096	0.057525	0.058116
7	0.039433	0.055310	0.041552	0.041552	0.052672	0.051595	0.052695	0.054749	0.069221	0.071436	0.058059	0.063625	0.060032
8	0.028811	0.045595	0.041082	0.041082	0.048125	0.046622	0.047904	0.050848	0.048059	0.048826	0.055022	0.032744	0.030871
9	0.027523	0.038449	0.036639	0.036639	0.064014	0.070939	0.067696	0.026131	0.017683	0.017043	0.015178	0.021855	0.019997
10	0.052953	0.032268	0.028753	0.028753	0.059196	0.066851	0.059289	0.026395	0.017940	0.016190	0.015220	0.028546	0.027428
11	0.051666	0.043966	0.048301	0.048301	0.050025	0.053616	0.055111	0.030946	0.044072	0.041381	0.015055	0.026198	0.024805
12	0.060357	0.042011	0.046799	0.046799	0.045285	0.051800	0.050126	0.026719	0.028590	0.027061	0.013710	0.087920	0.078722
13	0.053114	0.034009	0.042341	0.042341	0.027519	0.037038	0.026572	0.022762	0.030257	0.030204	0.016287	0.056383	0.050902
14	0.047964	0.029856	0.035259	0.035259	0.023114	0.038227	0.025789	0.022114	0.023951	0.025697	0.008257	0.048250	0.043087
15	0.034444	0.025043	0.039141	0.039141	0.019768	0.029133	0.025323	0.015965	0.018410	0.019228	0.015311	0.028953	0.024421
16	0.038468	0.021730	0.036320	0.036320	0.020334	0.035504	0.022005	0.011312	0.014718	0.015792	0.002516	0.022498	0.021618
17	0.033639	0.018405	0.036472	0.036472	0.021884	0.032433	0.026359	0.020025	0.013232	0.013489	0.004349	0.018760	0.016864
18	0.021407	0.014511	0.033378	0.033378	0.020946	0.027559	0.025198	0.016314	0.013138	0.013534	0.016009	0.025502	0.023545
19	0.020924	0.012172	0.024158	0.024158	0.020545	0.017950	0.020764	0.045336	0.010719	0.009828	0.026480	0.035354	0.032228
20	0.013842	0.008949	0.019684	0.019684	0.024052	0.014542	0.018668	0.035616	0.009528	0.009369	0.034700	0.027142	0.024374
21	0.011106	0.006593	0.013285	0.013285	0.013883	0.010189	0.015413	0.029179	0.003893	0.004506	0.026380	0.020163	0.018389
22	0.006921	0.004694	0.012799	0.012799	0.012940	0.010052	0.016058	0.023923	0.004563	0.004678	0.040035	0.013407	0.012671
23	0.009013	0.002880	0.008872	0.008872	0.015951	0.009652	0.011191	0.025391	0.002344	0.002323	0.029321	0.012108	0.012375
24	0.005150	0.002463	0.007507	0.007507	0.014005	0.008408	0.012497	0.022116	0.002225	0.002388	0.026858	0.012069	0.011774
25	0.002897	0.001944	0.006839	0.006839	0.015337	0.007281	0.013322	0.022806	0.001247	0.001414	0.017266	0.007491	0.008079
26	0.004024	0.001392	0.004565	0.004565	0.016979	0.004626	0.011010	0.026631	0.001003	0.001073	0.031264	0.005785	0.006273
27	0.001288	0.001082	0.002881	0.002881	0.009554	0.002789	0.005589	0.021048	0.000740	0.000713	0.047300	0.003739	0.003870
28	0.001449	0.000981	0.002199	0.002199	0.007379	0.001402	0.004990	0.012815	0.000677	0.000730	0.020905	0.002912	0.003640
29	0.002414	0.000800	0.002002	0.002002	0.006276	0.000575	0.004078	0.008047	0.000533	0.000653	0.033963	0.002335	0.003493
30	0.022855	0.007123	0.010631	0.010631	0.017635	0.001218	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Galveston County 2027 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.059392	0.059266	0.050818	0.050818	0.052770	0.052770	0.052770	0.055385	0.107326	0.108951	0.055385	0.054796	0.068825
1	0.068727	0.085363	0.072307	0.072307	0.052814	0.052631	0.052756	0.055139	0.098838	0.103650	0.056488	0.056698	0.059543
2	0.061323	0.090480	0.063375	0.063375	0.052718	0.052406	0.052638	0.054991	0.113632	0.111268	0.056702	0.044354	0.047903
3	0.059231	0.081649	0.057840	0.057840	0.052918	0.052454	0.052831	0.055204	0.089706	0.085755	0.057356	0.053668	0.060675
4	0.056333	0.088141	0.058295	0.058295	0.053891	0.053316	0.053743	0.055756	0.101333	0.102451	0.058781	0.064806	0.071965
5	0.053275	0.073997	0.061828	0.061828	0.053660	0.052939	0.053478	0.055275	0.056427	0.056032	0.058720	0.056252	0.057263
6	0.050056	0.068880	0.054079	0.054079	0.050110	0.049293	0.049951	0.052822	0.053431	0.050813	0.056704	0.057525	0.058116
7	0.039433	0.055310	0.041552	0.041552	0.050257	0.049260	0.050171	0.052730	0.069221	0.071436	0.056813	0.063625	0.060032
8	0.028811	0.045595	0.041082	0.041082	0.050525	0.049151	0.050427	0.052628	0.048059	0.048826	0.057311	0.032744	0.030871
9	0.027523	0.038449	0.036639	0.036639	0.046163	0.044413	0.045842	0.048878	0.017683	0.017043	0.054314	0.021855	0.019997
10	0.052953	0.032268	0.028753	0.028753	0.061404	0.067579	0.064781	0.025119	0.017940	0.016190	0.014982	0.028546	0.027428
11	0.051666	0.043966	0.048301	0.048301	0.056161	0.062912	0.056092	0.025148	0.044072	0.041381	0.014903	0.026198	0.024805
12	0.060357	0.042011	0.046799	0.046799	0.047461	0.050457	0.052138	0.029484	0.028590	0.027061	0.014741	0.087920	0.078722
13	0.053114	0.034009	0.042341	0.042341	0.042489	0.048150	0.046877	0.025230	0.030257	0.030204	0.013316	0.056383	0.050902
14	0.047964	0.029856	0.035259	0.035259	0.025820	0.034428	0.024850	0.021493	0.023951	0.025697	0.015819	0.048250	0.043087
15	0.034444	0.025043	0.039141	0.039141	0.021687	0.035534	0.024118	0.020881	0.018410	0.019228	0.008020	0.028953	0.024421
16	0.038468	0.021730	0.036320	0.036320	0.018340	0.026744	0.023407	0.014939	0.014718	0.015792	0.014749	0.022498	0.021618
17	0.033639	0.018405	0.036472	0.036472	0.018865	0.032592	0.020340	0.010585	0.013232	0.013489	0.002423	0.018760	0.016864
18	0.021407	0.014511	0.033378	0.033378	0.020074	0.029399	0.024077	0.018568	0.013138	0.013534	0.004155	0.025502	0.023545
19	0.020924	0.012172	0.024158	0.024158	0.019213	0.024981	0.023017	0.015126	0.010719	0.009828	0.015295	0.035354	0.032228
20	0.013842	0.008949	0.019684	0.019684	0.018630	0.016064	0.018740	0.041651	0.009528	0.009369	0.025089	0.027142	0.024374
21	0.011106	0.006593	0.013285	0.013285	0.021810	0.013014	0.016849	0.032722	0.003893	0.004506	0.032878	0.020163	0.018389
22	0.006921	0.004694	0.012799	0.012799	0.012589	0.009118	0.013911	0.026807	0.004563	0.004678	0.024995	0.013407	0.012671
23	0.009013	0.002880	0.008872	0.008872	0.011598	0.008880	0.014318	0.021775	0.002344	0.002323	0.037614	0.012108	0.012375
24	0.005150	0.002463	0.007507	0.007507	0.014297	0.008526	0.009979	0.023111	0.002225	0.002388	0.027548	0.012069	0.011774
25	0.002897	0.001944	0.006839	0.006839	0.012553	0.007427	0.011144	0.020130	0.001247	0.001414	0.025235	0.007491	0.008079
26	0.004024	0.001392	0.004565	0.004565	0.013586	0.006348	0.011734	0.020564	0.001003	0.001073	0.016085	0.005785	0.006273
27	0.001288	0.001082	0.002881	0.002881	0.015041	0.004033	0.009698	0.024014	0.000740	0.000713	0.029126	0.003739	0.003870
28	0.001449	0.000981	0.002199	0.002199	0.008463	0.002432	0.004923	0.018979	0.000677	0.000730	0.044065	0.002912	0.003640
29	0.002414	0.000800	0.002002	0.002002	0.006459	0.001206	0.004341	0.011447	0.000533	0.000653	0.019310	0.002335	0.003493
30	0.022855	0.007123	0.010631	0.010631	0.017635	0.001542	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Harris County 2011 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.067022	0.060996	0.050704	0.050704	0.036180	0.074697	0.043899	0.020412	0.107326	0.108951	0.017572	0.054796	0.068825
1	0.073186	0.079200	0.064064	0.064064	0.039841	0.101513	0.042214	0.015110	0.098838	0.103650	0.002979	0.056698	0.059543
2	0.061329	0.076245	0.050862	0.050862	0.046623	0.104812	0.055843	0.028331	0.113632	0.111268	0.005313	0.044354	0.047903
3	0.063540	0.075379	0.048647	0.048647	0.049281	0.102921	0.059585	0.025227	0.089706	0.085755	0.020619	0.053668	0.060675
4	0.062075	0.083557	0.051486	0.051486	0.052966	0.076456	0.054774	0.076490	0.101333	0.102451	0.035762	0.064806	0.071965
5	0.057100	0.072572	0.055214	0.055214	0.068397	0.072053	0.055227	0.064970	0.056427	0.056032	0.048854	0.056252	0.057263
6	0.053341	0.068192	0.046605	0.046605	0.042648	0.057371	0.050452	0.056933	0.053431	0.050813	0.038874	0.057525	0.058116
7	0.045852	0.057464	0.040483	0.040483	0.042736	0.064267	0.058689	0.049088	0.069221	0.071436	0.060535	0.063625	0.060032
8	0.030844	0.047021	0.041143	0.041143	0.057372	0.070033	0.045203	0.055546	0.048059	0.048826	0.046135	0.032744	0.030871
9	0.025565	0.041397	0.034951	0.034951	0.054751	0.068493	0.055453	0.052116	0.017683	0.017043	0.044240	0.021855	0.019997
10	0.053784	0.035266	0.029555	0.029555	0.065557	0.068653	0.065744	0.057687	0.017940	0.016190	0.029414	0.028546	0.027428
11	0.051103	0.047958	0.053325	0.053325	0.078557	0.049889	0.060342	0.072218	0.044072	0.041381	0.055786	0.026198	0.024805
12	0.062324	0.046919	0.054891	0.054891	0.047578	0.034391	0.034339	0.060105	0.028590	0.027061	0.086656	0.087920	0.078722
13	0.054502	0.037948	0.047402	0.047402	0.039627	0.019471	0.033557	0.038712	0.030257	0.030204	0.039532	0.056383	0.050902
14	0.041181	0.032786	0.041876	0.041876	0.036599	0.009178	0.030650	0.026002	0.023951	0.025697	0.066825	0.048250	0.043087
15	0.030181	0.027263	0.043250	0.043250	0.029292	0.013218	0.027866	0.034289	0.018410	0.019228	0.035417	0.028953	0.024421
16	0.037505	0.023986	0.040752	0.040752	0.030064	0.002472	0.031547	0.039908	0.014718	0.015792	0.039586	0.022498	0.021618
17	0.029545	0.019987	0.040158	0.040158	0.023718	0.004862	0.016693	0.025686	0.013232	0.013489	0.041853	0.018760	0.016864
18	0.019955	0.015696	0.036866	0.036866	0.021178	0.000730	0.020301	0.020470	0.013138	0.013534	0.025183	0.025502	0.023545
19	0.014510	0.013126	0.028642	0.028642	0.013178	0.001112	0.018896	0.016540	0.010719	0.009828	0.024551	0.035354	0.032228
20	0.011663	0.009768	0.021304	0.021304	0.011799	0.000936	0.024538	0.021137	0.009528	0.009369	0.016394	0.027142	0.024374
21	0.008015	0.006721	0.014751	0.014751	0.017000	0.001181	0.026242	0.024395	0.003893	0.004506	0.025289	0.020163	0.018389
22	0.006357	0.004944	0.014138	0.014138	0.021289	0.000616	0.013673	0.017998	0.004563	0.004678	0.031470	0.013407	0.012671
23	0.006191	0.003024	0.009339	0.009339	0.013982	0.000249	0.014528	0.019271	0.002344	0.002323	0.028159	0.012108	0.012375
24	0.004201	0.002288	0.008224	0.008224	0.009457	0.000070	0.013551	0.017751	0.002225	0.002388	0.025783	0.012069	0.011774
25	0.003814	0.001584	0.006870	0.006870	0.007992	0.000024	0.010508	0.012854	0.001247	0.001414	0.015597	0.007491	0.008079
26	0.002487	0.001192	0.004385	0.004385	0.008237	0.000050	0.007903	0.012188	0.001003	0.001073	0.016256	0.005785	0.006273
27	0.002073	0.000922	0.003318	0.003318	0.006363	0.000037	0.006810	0.010137	0.000740	0.000713	0.015723	0.003739	0.003870
28	0.001106	0.000832	0.002499	0.002499	0.005349	0.000027	0.005974	0.008018	0.000677	0.000730	0.014339	0.002912	0.003640
29	0.001492	0.000640	0.002173	0.002173	0.004757	0.000020	0.004936	0.006995	0.000533	0.000653	0.014229	0.002335	0.003493
30	0.018158	0.005128	0.012123	0.012123	0.017635	0.000198	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Harris County 2017 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.067022	0.060996	0.050704	0.050704	0.078824	0.091142	0.083978	0.031614	0.107326	0.108951	0.016664	0.054796	0.068825
1	0.073186	0.079200	0.064064	0.064064	0.075667	0.090093	0.076580	0.032820	0.098838	0.103650	0.017093	0.056698	0.059543
2	0.061329	0.076245	0.050862	0.050862	0.067199	0.077034	0.075099	0.039904	0.113632	0.111268	0.017428	0.044354	0.047903
3	0.063540	0.075379	0.048647	0.048647	0.063959	0.079629	0.072132	0.035734	0.089706	0.085755	0.016351	0.053668	0.060675
4	0.062075	0.083557	0.051486	0.051486	0.041394	0.062045	0.040955	0.031878	0.101333	0.102451	0.020170	0.064806	0.071965
5	0.057100	0.072572	0.055214	0.055214	0.036596	0.068674	0.042028	0.032138	0.056427	0.056032	0.010539	0.056252	0.057263
6	0.053341	0.068192	0.046605	0.046605	0.032532	0.055132	0.043047	0.023869	0.053431	0.050813	0.019997	0.057525	0.058116
7	0.045852	0.057464	0.040483	0.040483	0.035230	0.072004	0.039560	0.017559	0.069221	0.071436	0.003389	0.063625	0.060032
8	0.030844	0.047021	0.041143	0.041143	0.039392	0.069145	0.049382	0.031958	0.048059	0.048826	0.005994	0.032744	0.030871
9	0.025565	0.041397	0.034951	0.034951	0.039680	0.062851	0.049899	0.027028	0.017683	0.017043	0.022758	0.021855	0.019997
10	0.053784	0.035266	0.029555	0.029555	0.041020	0.044016	0.043545	0.078002	0.017940	0.016190	0.038819	0.028546	0.027428
11	0.051103	0.047958	0.053325	0.053325	0.050566	0.038149	0.041402	0.063658	0.044072	0.041381	0.052497	0.026198	0.024805
12	0.062324	0.046919	0.054891	0.054891	0.030779	0.028742	0.036224	0.054189	0.028590	0.027061	0.041177	0.087920	0.078722
13	0.054502	0.037948	0.047402	0.047402	0.029860	0.029906	0.039417	0.045716	0.030257	0.030204	0.063961	0.056383	0.050902
14	0.041181	0.032786	0.041876	0.041876	0.038819	0.030838	0.029111	0.050432	0.023951	0.025697	0.048354	0.048250	0.043087
15	0.030181	0.027263	0.043250	0.043250	0.035967	0.028980	0.034482	0.045640	0.018410	0.019228	0.045680	0.028953	0.024421
16	0.037505	0.023986	0.040752	0.040752	0.041037	0.026572	0.038448	0.048454	0.014718	0.015792	0.030061	0.022498	0.021618
17	0.029545	0.019987	0.040158	0.040158	0.047968	0.018212	0.033726	0.058821	0.013232	0.013489	0.056177	0.018760	0.016864
18	0.019955	0.015696	0.036866	0.036866	0.028106	0.011607	0.017894	0.047873	0.013138	0.013534	0.087043	0.025502	0.023545
19	0.014510	0.013126	0.028642	0.028642	0.022635	0.006198	0.016732	0.030019	0.010719	0.009828	0.039384	0.035354	0.032228
20	0.011663	0.009768	0.021304	0.021304	0.020051	0.002680	0.014288	0.019410	0.009528	0.009369	0.065558	0.027142	0.024374
21	0.008015	0.006721	0.014751	0.014751	0.015338	0.003551	0.012169	0.024501	0.003893	0.004506	0.034386	0.020163	0.018389
22	0.006357	0.004944	0.014138	0.014138	0.015262	0.000636	0.013276	0.027421	0.004563	0.004678	0.037837	0.013407	0.012671
23	0.006191	0.003024	0.009339	0.009339	0.011438	0.001134	0.006577	0.016877	0.002344	0.002323	0.039588	0.012108	0.012375
24	0.004201	0.002288	0.008224	0.008224	0.009950	0.000160	0.007616	0.013002	0.002225	0.002388	0.023454	0.012069	0.011774
25	0.003814	0.001584	0.006870	0.006870	0.006052	0.000234	0.006794	0.010264	0.001247	0.001414	0.022808	0.007491	0.008079
26	0.002487	0.001192	0.004385	0.004385	0.005200	0.000182	0.008420	0.012742	0.001003	0.001073	0.015103	0.005785	0.006273
27	0.002073	0.000922	0.003318	0.003318	0.007295	0.000215	0.008562	0.014199	0.000740	0.000713	0.022934	0.003739	0.003870
28	0.001106	0.000832	0.002499	0.002499	0.008928	0.000108	0.004271	0.010231	0.000677	0.000730	0.028466	0.002912	0.003640
29	0.001492	0.000640	0.002173	0.002173	0.005620	0.000040	0.004325	0.010633	0.000533	0.000653	0.025257	0.002335	0.003493
30	0.018158	0.005128	0.012123	0.012123	0.017635	0.000091	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Harris County 2018 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.067022	0.060996	0.050704	0.050704	0.056764	0.056764	0.056764	0.059441	0.107326	0.108951	0.059441	0.054796	0.068825
1	0.073186	0.079200	0.064064	0.064064	0.078327	0.090363	0.083431	0.031402	0.098838	0.103650	0.016783	0.056698	0.059543
2	0.061329	0.076245	0.050862	0.050862	0.075191	0.089323	0.076081	0.032600	0.113632	0.111268	0.017214	0.044354	0.047903
3	0.063540	0.075379	0.048647	0.048647	0.066776	0.076375	0.074609	0.039636	0.089706	0.085755	0.017551	0.053668	0.060675
4	0.062075	0.083557	0.051486	0.051486	0.063556	0.078948	0.071662	0.035495	0.101333	0.102451	0.016467	0.064806	0.071965
5	0.057100	0.072572	0.055214	0.055214	0.040595	0.060250	0.040093	0.031371	0.056427	0.056032	0.020168	0.056252	0.057263
6	0.053341	0.068192	0.046605	0.046605	0.035413	0.065287	0.040533	0.031332	0.053431	0.050813	0.010463	0.057525	0.058116
7	0.045852	0.057464	0.040483	0.040483	0.031480	0.052413	0.041516	0.023270	0.069221	0.071436	0.019852	0.063625	0.060032
8	0.030844	0.047021	0.041143	0.041143	0.033634	0.066986	0.037578	0.016956	0.048059	0.048826	0.003340	0.032744	0.030871
9	0.025565	0.041397	0.034951	0.034951	0.037606	0.064326	0.046908	0.030862	0.017683	0.017043	0.005908	0.021855	0.019997
10	0.053784	0.035266	0.029555	0.029555	0.037881	0.058471	0.047399	0.026101	0.017940	0.016190	0.022431	0.028546	0.027428
11	0.051103	0.047958	0.053325	0.053325	0.038627	0.040052	0.040731	0.074609	0.044072	0.041381	0.037983	0.026198	0.024805
12	0.062324	0.046919	0.054891	0.054891	0.047616	0.034712	0.038727	0.060889	0.028590	0.027061	0.051366	0.087920	0.078722
13	0.054502	0.037948	0.047402	0.047402	0.028583	0.025567	0.033357	0.051333	0.030257	0.030204	0.039996	0.056383	0.050902
14	0.041181	0.032786	0.041876	0.041876	0.027729	0.026602	0.036297	0.043307	0.023951	0.025697	0.062126	0.048250	0.043087
15	0.030181	0.027263	0.043250	0.043250	0.036049	0.027432	0.026806	0.047774	0.018410	0.019228	0.046967	0.028953	0.024421
16	0.037505	0.023986	0.040752	0.040752	0.032933	0.025188	0.031252	0.042815	0.014718	0.015792	0.044042	0.022498	0.021618
17	0.029545	0.019987	0.040158	0.040158	0.037575	0.023095	0.034847	0.045455	0.013232	0.013489	0.028983	0.018760	0.016864
18	0.019955	0.015696	0.036866	0.036866	0.043298	0.015458	0.030076	0.054639	0.013138	0.013534	0.053761	0.025502	0.023545
19	0.014510	0.013126	0.028642	0.028642	0.025369	0.009852	0.015958	0.044470	0.010719	0.009828	0.083300	0.035354	0.032228
20	0.011663	0.009768	0.021304	0.021304	0.020137	0.005134	0.014678	0.027609	0.009528	0.009369	0.037408	0.027142	0.024374
21	0.008015	0.006721	0.014751	0.014751	0.017838	0.002220	0.012535	0.017851	0.003893	0.004506	0.062269	0.020163	0.018389
22	0.006357	0.004944	0.014138	0.014138	0.013645	0.002941	0.010676	0.022533	0.004563	0.004678	0.032661	0.013407	0.012671
23	0.006191	0.003024	0.009339	0.009339	0.013379	0.000514	0.011454	0.024967	0.002344	0.002323	0.035668	0.012108	0.012375
24	0.004201	0.002288	0.008224	0.008224	0.010027	0.000916	0.005674	0.015367	0.002225	0.002388	0.037319	0.012069	0.011774
25	0.003814	0.001584	0.006870	0.006870	0.008723	0.000129	0.006571	0.011838	0.001247	0.001414	0.022110	0.007491	0.008079
26	0.002487	0.001192	0.004385	0.004385	0.005227	0.000184	0.005762	0.009251	0.001003	0.001073	0.021337	0.005785	0.006273
27	0.002073	0.000922	0.003318	0.003318	0.004490	0.000144	0.007142	0.011484	0.000740	0.000713	0.014129	0.003739	0.003870
28	0.001106	0.000832	0.002499	0.002499	0.006300	0.000169	0.007262	0.012798	0.000677	0.000730	0.021455	0.002912	0.003640
29	0.001492	0.000640	0.002173	0.002173	0.007594	0.000083	0.003561	0.009127	0.000533	0.000653	0.026427	0.002335	0.003493
30	0.018158	0.005128	0.012123	0.012123	0.017635	0.000101	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Harris County 2020 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.067022	0.060996	0.050704	0.050704	0.056623	0.056623	0.056623	0.059505	0.107326	0.108951	0.059505	0.054796	0.068825
1	0.073186	0.079200	0.064064	0.064064	0.058906	0.058781	0.059000	0.060992	0.098838	0.103650	0.061446	0.056698	0.059543
2	0.061329	0.076245	0.050862	0.050862	0.055787	0.055441	0.055725	0.058218	0.113632	0.111268	0.059616	0.044354	0.047903
3	0.063540	0.075379	0.048647	0.048647	0.076979	0.088257	0.081903	0.030756	0.089706	0.085755	0.016832	0.053668	0.060675
4	0.062075	0.083557	0.051486	0.051486	0.073896	0.087241	0.074688	0.031930	0.101333	0.102451	0.017265	0.064806	0.071965
5	0.057100	0.072572	0.055214	0.055214	0.064800	0.073271	0.072235	0.038481	0.056427	0.056032	0.017480	0.056252	0.057263
6	0.053341	0.068192	0.046605	0.046605	0.060109	0.072950	0.067439	0.033841	0.053431	0.050813	0.016168	0.057525	0.058116
7	0.045852	0.057464	0.040483	0.040483	0.037895	0.054587	0.037185	0.029629	0.069221	0.071436	0.019658	0.063625	0.060032
8	0.030844	0.047021	0.041143	0.041143	0.032631	0.058063	0.037061	0.029329	0.048059	0.048826	0.010126	0.032744	0.030871
9	0.025565	0.041397	0.034951	0.034951	0.028626	0.045687	0.037403	0.021577	0.017683	0.017043	0.019072	0.021855	0.019997
10	0.053784	0.035266	0.029555	0.029555	0.030584	0.058389	0.033855	0.015723	0.017940	0.016190	0.003209	0.028546	0.027428
11	0.051103	0.047958	0.053325	0.053325	0.033749	0.055020	0.041655	0.028360	0.044072	0.041381	0.005636	0.026198	0.024805
12	0.062324	0.046919	0.054891	0.054891	0.033542	0.048997	0.041464	0.023756	0.028590	0.027061	0.021238	0.087920	0.078722
13	0.054502	0.037948	0.047402	0.047402	0.033749	0.032921	0.035112	0.067292	0.030257	0.030204	0.035704	0.056383	0.050902
14	0.041181	0.032786	0.041876	0.041876	0.041041	0.027942	0.032880	0.054391	0.023951	0.025697	0.047926	0.048250	0.043087
15	0.030181	0.027263	0.043250	0.043250	0.024637	0.020580	0.028321	0.045855	0.018410	0.019228	0.037318	0.028953	0.024421
16	0.037505	0.023986	0.040752	0.040752	0.023580	0.020997	0.030362	0.038331	0.014718	0.015792	0.057546	0.022498	0.021618
17	0.029545	0.019987	0.040158	0.040158	0.030235	0.021194	0.022079	0.041875	0.013232	0.013489	0.043179	0.018760	0.016864
18	0.019955	0.015696	0.036866	0.036866	0.027245	0.019074	0.025355	0.037181	0.013138	0.013534	0.040195	0.025502	0.023545
19	0.014510	0.013126	0.028642	0.028642	0.030654	0.017111	0.027831	0.039087	0.010719	0.009828	0.026252	0.035354	0.032228
20	0.011663	0.009768	0.021304	0.021304	0.034835	0.011221	0.023655	0.046548	0.009528	0.009369	0.048337	0.027142	0.024374
21	0.008015	0.006721	0.014751	0.014751	0.020123	0.006993	0.012353	0.037509	0.003893	0.004506	0.074328	0.020163	0.018389
22	0.006357	0.004944	0.014138	0.014138	0.015973	0.003645	0.011362	0.023287	0.004563	0.004678	0.033379	0.013407	0.012671
23	0.006191	0.003024	0.009339	0.009339	0.013951	0.001543	0.009553	0.014916	0.002344	0.002323	0.055151	0.012108	0.012375
24	0.004201	0.002288	0.008224	0.008224	0.010520	0.001999	0.008005	0.018640	0.002225	0.002388	0.028706	0.012069	0.011774
25	0.003814	0.001584	0.006870	0.006870	0.010315	0.000349	0.008588	0.020653	0.001247	0.001414	0.031349	0.007491	0.008079
26	0.002487	0.001192	0.004385	0.004385	0.007620	0.000609	0.004188	0.012591	0.001003	0.001073	0.032556	0.005785	0.006273
27	0.002073	0.000922	0.003318	0.003318	0.006533	0.000084	0.004770	0.009602	0.000740	0.000713	0.019139	0.003739	0.003870
28	0.001106	0.000832	0.002499	0.002499	0.003915	0.000120	0.004184	0.007503	0.000677	0.000730	0.018470	0.002912	0.003640
29	0.001492	0.000640	0.002173	0.002173	0.003315	0.000091	0.005102	0.009226	0.000533	0.000653	0.012139	0.002335	0.003493
30	0.018158	0.005128	0.012123	0.012123	0.017635	0.000219	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Harris County 2023 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.067022	0.060996	0.050704	0.050704	0.055916	0.055916	0.055916	0.058180	0.107326	0.108951	0.058180	0.054796	0.068825
1	0.073186	0.079200	0.064064	0.064064	0.056272	0.056177	0.056259	0.058179	0.098838	0.103650	0.058578	0.056698	0.059543
2	0.061329	0.076245	0.050862	0.050862	0.053703	0.053595	0.053754	0.056574	0.113632	0.111268	0.057461	0.044354	0.047903
3	0.063540	0.075379	0.048647	0.048647	0.055079	0.054952	0.055275	0.057472	0.089706	0.085755	0.058467	0.053668	0.060675
4	0.062075	0.083557	0.051486	0.051486	0.057299	0.057046	0.057596	0.058908	0.101333	0.102451	0.060375	0.064806	0.071965
5	0.057100	0.072572	0.055214	0.055214	0.053587	0.052974	0.053667	0.055701	0.056427	0.056032	0.058115	0.056252	0.057263
6	0.053341	0.068192	0.046605	0.046605	0.072106	0.081694	0.076767	0.028881	0.053431	0.050813	0.016156	0.057525	0.058116
7	0.045852	0.057464	0.040483	0.040483	0.067500	0.078131	0.068119	0.029440	0.069221	0.071436	0.016327	0.063625	0.060032
8	0.030844	0.047021	0.041143	0.041143	0.057694	0.063477	0.064077	0.034826	0.048059	0.048826	0.016279	0.032744	0.030871
9	0.025565	0.041397	0.034951	0.034951	0.052840	0.062167	0.059003	0.030340	0.017683	0.017043	0.014941	0.021855	0.019997
10	0.053784	0.035266	0.029555	0.029555	0.032885	0.045715	0.032079	0.026323	0.017940	0.016190	0.018033	0.028546	0.027428
11	0.051103	0.047958	0.053325	0.053325	0.027950	0.047838	0.031525	0.025805	0.044072	0.041381	0.009215	0.026198	0.024805
12	0.062324	0.046919	0.054891	0.054891	0.024205	0.037017	0.031373	0.018806	0.028590	0.027061	0.017221	0.087920	0.078722
13	0.054502	0.037948	0.047402	0.047402	0.025189	0.045712	0.027598	0.013446	0.030257	0.030204	0.002852	0.056383	0.050902
14	0.041181	0.032786	0.041876	0.041876	0.027435	0.042348	0.033477	0.024021	0.023951	0.025697	0.004971	0.048250	0.043087
15	0.030181	0.027263	0.043250	0.043250	0.026908	0.037037	0.032845	0.019936	0.018410	0.019228	0.018594	0.028953	0.024421
16	0.037505	0.023986	0.040752	0.040752	0.026714	0.024469	0.027413	0.055915	0.014718	0.015792	0.031004	0.022498	0.021618
17	0.029545	0.019987	0.040158	0.040158	0.032058	0.020412	0.025303	0.044760	0.013232	0.013489	0.041292	0.018760	0.016864
18	0.019955	0.015696	0.036866	0.036866	0.018731	0.014509	0.021163	0.037012	0.013138	0.013534	0.031647	0.025502	0.023545
19	0.014510	0.013126	0.028642	0.028642	0.017689	0.014544	0.022359	0.030639	0.010719	0.009828	0.048417	0.035354	0.032228
20	0.011663	0.009768	0.021304	0.021304	0.022068	0.014159	0.015781	0.032824	0.009528	0.009369	0.035754	0.027142	0.024374
21	0.008015	0.006721	0.014751	0.014751	0.019618	0.012516	0.017856	0.028859	0.003893	0.004506	0.033019	0.020163	0.018389
22	0.006357	0.004944	0.014138	0.014138	0.021770	0.011016	0.019305	0.030050	0.004563	0.004678	0.021400	0.013407	0.012671
23	0.006191	0.003024	0.009339	0.009339	0.024396	0.007096	0.016162	0.035423	0.002344	0.002323	0.039074	0.012108	0.012375
24	0.004201	0.002288	0.008224	0.008224	0.013900	0.004343	0.008313	0.028262	0.002225	0.002388	0.059603	0.012069	0.011774
25	0.003814	0.001584	0.006870	0.006870	0.010880	0.002220	0.007530	0.017378	0.001247	0.001414	0.026560	0.007491	0.008079
26	0.002487	0.001192	0.004385	0.004385	0.009369	0.000923	0.006234	0.011017	0.001003	0.001073	0.043513	0.005785	0.006273
27	0.002073	0.000922	0.003318	0.003318	0.006966	0.001173	0.005145	0.013629	0.000740	0.000713	0.022466	0.003739	0.003870
28	0.001106	0.000832	0.002499	0.002499	0.006734	0.000201	0.005435	0.014955	0.000677	0.000730	0.024344	0.002912	0.003640
29	0.001492	0.000640	0.002173	0.002173	0.004904	0.000344	0.002609	0.009023	0.000533	0.000653	0.025065	0.002335	0.003493
30	0.018158	0.005128	0.012123	0.012123	0.017635	0.000280	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Harris County 2026 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.067022	0.060996	0.050704	0.050704	0.053311	0.053311	0.053311	0.055878	0.107326	0.108951	0.055878	0.054796	0.068825
1	0.073186	0.079200	0.064064	0.064064	0.053213	0.053082	0.053192	0.055727	0.098838	0.103650	0.056089	0.056698	0.059543
2	0.061329	0.076245	0.050862	0.050862	0.053415	0.053131	0.053387	0.055943	0.113632	0.111268	0.056737	0.044354	0.047903
3	0.063540	0.075379	0.048647	0.048647	0.054397	0.054004	0.054308	0.056503	0.089706	0.085755	0.058147	0.053668	0.060675
4	0.062075	0.083557	0.051486	0.051486	0.054744	0.054257	0.054641	0.056502	0.101333	0.102451	0.058545	0.064806	0.071965
5	0.057100	0.072572	0.055214	0.055214	0.051675	0.051124	0.051612	0.054469	0.056427	0.056032	0.056986	0.056252	0.057263
6	0.053341	0.068192	0.046605	0.046605	0.051827	0.051090	0.051839	0.054374	0.053431	0.050813	0.057096	0.057525	0.058116
7	0.045852	0.057464	0.040483	0.040483	0.052672	0.051595	0.052695	0.054749	0.069221	0.071436	0.058059	0.063625	0.060032
8	0.030844	0.047021	0.041143	0.041143	0.048125	0.046622	0.047904	0.050848	0.048059	0.048826	0.055022	0.032744	0.030871
9	0.025565	0.041397	0.034951	0.034951	0.064014	0.070939	0.067696	0.026131	0.017683	0.017043	0.015178	0.021855	0.019997
10	0.053784	0.035266	0.029555	0.029555	0.059196	0.066851	0.059289	0.026395	0.017940	0.016190	0.015220	0.028546	0.027428
11	0.051103	0.047958	0.053325	0.053325	0.050025	0.053616	0.055111	0.030946	0.044072	0.041381	0.015055	0.026198	0.024805
12	0.062324	0.046919	0.054891	0.054891	0.045285	0.051800	0.050126	0.026719	0.028590	0.027061	0.013710	0.087920	0.078722
13	0.054502	0.037948	0.047402	0.047402	0.027519	0.037038	0.026572	0.022762	0.030257	0.030204	0.016287	0.056383	0.050902
14	0.041181	0.032786	0.041876	0.041876	0.023114	0.038227	0.025789	0.022114	0.023951	0.025697	0.008257	0.048250	0.043087
15	0.030181	0.027263	0.043250	0.043250	0.019768	0.029133	0.025323	0.015965	0.018410	0.019228	0.015311	0.028953	0.024421
16	0.037505	0.023986	0.040752	0.040752	0.020334	0.035504	0.022005	0.011312	0.014718	0.015792	0.002516	0.022498	0.021618
17	0.029545	0.019987	0.040158	0.040158	0.021884	0.032433	0.026359	0.020025	0.013232	0.013489	0.004349	0.018760	0.016864
18	0.019955	0.015696	0.036866	0.036866	0.020946	0.027559	0.025198	0.016314	0.013138	0.013534	0.016009	0.025502	0.023545
19	0.014510	0.013126	0.028642	0.028642	0.020545	0.017950	0.020764	0.045336	0.010719	0.009828	0.026480	0.035354	0.032228
20	0.011663	0.009768	0.021304	0.021304	0.024052	0.014542	0.018668	0.035616	0.009528	0.009369	0.034700	0.027142	0.024374
21	0.008015	0.006721	0.014751	0.014751	0.013883	0.010189	0.015413	0.029179	0.003893	0.004506	0.026380	0.020163	0.018389
22	0.006357	0.004944	0.014138	0.014138	0.012940	0.010052	0.016058	0.023923	0.004563	0.004678	0.040035	0.013407	0.012671
23	0.006191	0.003024	0.009339	0.009339	0.015951	0.009652	0.011191	0.025391	0.002344	0.002323	0.029321	0.012108	0.012375
24	0.004201	0.002288	0.008224	0.008224	0.014005	0.008408	0.012497	0.022116	0.002225	0.002388	0.026858	0.012069	0.011774
25	0.003814	0.001584	0.006870	0.006870	0.015337	0.007281	0.013322	0.022806	0.001247	0.001414	0.017266	0.007491	0.008079
26	0.002487	0.001192	0.004385	0.004385	0.016979	0.004626	0.011010	0.026631	0.001003	0.001073	0.031264	0.005785	0.006273
27	0.002073	0.000922	0.003318	0.003318	0.009554	0.002789	0.005589	0.021048	0.000740	0.000713	0.047300	0.003739	0.003870
28	0.001106	0.000832	0.002499	0.002499	0.007379	0.001402	0.004990	0.012815	0.000677	0.000730	0.020905	0.002912	0.003640
29	0.001492	0.000640	0.002173	0.002173	0.006276	0.000575	0.004078	0.008047	0.000533	0.000653	0.033963	0.002335	0.003493
30	0.018158	0.005128	0.012123	0.012123	0.017635	0.001218	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Harris County 2027 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.067022	0.060996	0.050704	0.050704	0.052770	0.052770	0.052770	0.055385	0.107326	0.108951	0.055385	0.054796	0.068825
1	0.073186	0.079200	0.064064	0.064064	0.052814	0.052631	0.052756	0.055139	0.098838	0.103650	0.056488	0.056698	0.059543
2	0.061329	0.076245	0.050862	0.050862	0.052718	0.052406	0.052638	0.054991	0.113632	0.111268	0.056702	0.044354	0.047903
3	0.063540	0.075379	0.048647	0.048647	0.052918	0.052454	0.052831	0.055204	0.089706	0.085755	0.057356	0.053668	0.060675
4	0.062075	0.083557	0.051486	0.051486	0.053891	0.053316	0.053743	0.055756	0.101333	0.102451	0.058781	0.064806	0.071965
5	0.057100	0.072572	0.055214	0.055214	0.053660	0.052939	0.053478	0.055275	0.056427	0.056032	0.058720	0.056252	0.057263
6	0.053341	0.068192	0.046605	0.046605	0.050110	0.049293	0.049951	0.052822	0.053431	0.050813	0.056704	0.057525	0.058116
7	0.045852	0.057464	0.040483	0.040483	0.050257	0.049260	0.050171	0.052730	0.069221	0.071436	0.056813	0.063625	0.060032
8	0.030844	0.047021	0.041143	0.041143	0.050525	0.049151	0.050427	0.052628	0.048059	0.048826	0.057311	0.032744	0.030871
9	0.025565	0.041397	0.034951	0.034951	0.046163	0.044413	0.045842	0.048878	0.017683	0.017043	0.054314	0.021855	0.019997
10	0.053784	0.035266	0.029555	0.029555	0.061404	0.067579	0.064781	0.025119	0.017940	0.016190	0.014982	0.028546	0.027428
11	0.051103	0.047958	0.053325	0.053325	0.056161	0.062912	0.056092	0.025148	0.044072	0.041381	0.014903	0.026198	0.024805
12	0.062324	0.046919	0.054891	0.054891	0.047461	0.050457	0.052138	0.029484	0.028590	0.027061	0.014741	0.087920	0.078722
13	0.054502	0.037948	0.047402	0.047402	0.042489	0.048150	0.046877	0.025230	0.030257	0.030204	0.013316	0.056383	0.050902
14	0.041181	0.032786	0.041876	0.041876	0.025820	0.034428	0.024850	0.021493	0.023951	0.025697	0.015819	0.048250	0.043087
15	0.030181	0.027263	0.043250	0.043250	0.021687	0.035534	0.024118	0.020881	0.018410	0.019228	0.008020	0.028953	0.024421
16	0.037505	0.023986	0.040752	0.040752	0.018340	0.026744	0.023407	0.014939	0.014718	0.015792	0.014749	0.022498	0.021618
17	0.029545	0.019987	0.040158	0.040158	0.018865	0.032592	0.020340	0.010585	0.013232	0.013489	0.002423	0.018760	0.016864
18	0.019955	0.015696	0.036866	0.036866	0.020074	0.029399	0.024077	0.018568	0.013138	0.013534	0.004155	0.025502	0.023545
19	0.014510	0.013126	0.028642	0.028642	0.019213	0.024981	0.023017	0.015126	0.010719	0.009828	0.015295	0.035354	0.032228
20	0.011663	0.009768	0.021304	0.021304	0.018630	0.016064	0.018740	0.041651	0.009528	0.009369	0.025089	0.027142	0.024374
21	0.008015	0.006721	0.014751	0.014751	0.021810	0.013014	0.016849	0.032722	0.003893	0.004506	0.032878	0.020163	0.018389
22	0.006357	0.004944	0.014138	0.014138	0.012589	0.009118	0.013911	0.026807	0.004563	0.004678	0.024995	0.013407	0.012671
23	0.006191	0.003024	0.009339	0.009339	0.011598	0.008880	0.014318	0.021775	0.002344	0.002323	0.037614	0.012108	0.012375
24	0.004201	0.002288	0.008224	0.008224	0.014297	0.008526	0.009979	0.023111	0.002225	0.002388	0.027548	0.012069	0.011774
25	0.003814	0.001584	0.006870	0.006870	0.012553	0.007427	0.011144	0.020130	0.001247	0.001414	0.025235	0.007491	0.008079
26	0.002487	0.001192	0.004385	0.004385	0.013586	0.006348	0.011734	0.020564	0.001003	0.001073	0.016085	0.005785	0.006273
27	0.002073	0.000922	0.003318	0.003318	0.015041	0.004033	0.009698	0.024014	0.000740	0.000713	0.029126	0.003739	0.003870
28	0.001106	0.000832	0.002499	0.002499	0.008463	0.002432	0.004923	0.018979	0.000677	0.000730	0.044065	0.002912	0.003640
29	0.001492	0.000640	0.002173	0.002173	0.006459	0.001206	0.004341	0.011447	0.000533	0.000653	0.019310	0.002335	0.003493
30	0.018158	0.005128	0.012123	0.012123	0.017635	0.001542	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Liberty County 2011 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.055821	0.052213	0.042145	0.042145	0.036180	0.074697	0.043899	0.020412	0.107326	0.108951	0.017572	0.054796	0.068825
1	0.049442	0.074386	0.057456	0.057456	0.039841	0.101513	0.042214	0.015110	0.098838	0.103650	0.002979	0.056698	0.059543
2	0.050239	0.072547	0.046869	0.046869	0.046623	0.104812	0.055843	0.028331	0.113632	0.111268	0.005313	0.044354	0.047903
3	0.063796	0.068085	0.038317	0.038317	0.049281	0.102921	0.059585	0.025227	0.089706	0.085755	0.020619	0.053668	0.060675
4	0.047049	0.074602	0.043652	0.043652	0.052966	0.076456	0.054774	0.076490	0.101333	0.102451	0.035762	0.064806	0.071965
5	0.043062	0.065895	0.047113	0.047113	0.068397	0.072053	0.055227	0.064970	0.056427	0.056032	0.048854	0.056252	0.057263
6	0.045455	0.057864	0.041575	0.041575	0.042648	0.057371	0.050452	0.056933	0.053431	0.050813	0.038874	0.057525	0.058116
7	0.040670	0.050023	0.036974	0.036974	0.042736	0.064267	0.058689	0.049088	0.069221	0.071436	0.060535	0.063625	0.060032
8	0.034290	0.043182	0.038236	0.038236	0.057372	0.070033	0.045203	0.055546	0.048059	0.048826	0.046135	0.032744	0.030871
9	0.029506	0.038017	0.030499	0.030499	0.054751	0.068493	0.055453	0.052116	0.017683	0.017043	0.044240	0.021855	0.019997
10	0.059011	0.033853	0.027201	0.027201	0.065557	0.068653	0.065744	0.057687	0.017940	0.016190	0.029414	0.028546	0.027428
11	0.055821	0.049455	0.050533	0.050533	0.078557	0.049889	0.060342	0.072218	0.044072	0.041381	0.055786	0.026198	0.024805
12	0.060606	0.052808	0.050330	0.050330	0.047578	0.034391	0.034339	0.060105	0.028590	0.027061	0.086656	0.087920	0.078722
13	0.057416	0.044885	0.049638	0.049638	0.039627	0.019471	0.033557	0.038712	0.030257	0.030204	0.039532	0.056383	0.050902
14	0.055024	0.042019	0.044425	0.044425	0.036599	0.009178	0.030650	0.026002	0.023951	0.025697	0.066825	0.048250	0.043087
15	0.035088	0.031095	0.046991	0.046991	0.029292	0.013218	0.027866	0.034289	0.018410	0.019228	0.035417	0.028953	0.024421
16	0.044657	0.030555	0.047032	0.047032	0.030064	0.002472	0.031547	0.039908	0.014718	0.015792	0.039586	0.022498	0.021618
17	0.040670	0.026120	0.047968	0.047968	0.023718	0.004862	0.016693	0.025686	0.013232	0.013489	0.041853	0.018760	0.016864
18	0.023126	0.021875	0.045566	0.045566	0.021178	0.000730	0.020301	0.020470	0.013138	0.013534	0.025183	0.025502	0.023545
19	0.025518	0.016954	0.034368	0.034368	0.013178	0.001112	0.018896	0.016540	0.010719	0.009828	0.024551	0.035354	0.032228
20	0.021531	0.014412	0.027486	0.027486	0.011799	0.000936	0.024538	0.021137	0.009528	0.009369	0.016394	0.027142	0.024374
21	0.007177	0.009978	0.020604	0.020604	0.017000	0.001181	0.026242	0.024395	0.003893	0.004506	0.025289	0.020163	0.018389
22	0.015152	0.006976	0.019627	0.019627	0.021289	0.000616	0.013673	0.017998	0.004563	0.004678	0.031470	0.013407	0.012671
23	0.006380	0.004759	0.013071	0.013071	0.013982	0.000249	0.014528	0.019271	0.002344	0.002323	0.028159	0.012108	0.012375
24	0.007974	0.004516	0.013519	0.013519	0.009457	0.000070	0.013551	0.017751	0.002225	0.002388	0.025783	0.012069	0.011774
25	0.007974	0.002839	0.010099	0.010099	0.007992	0.000024	0.010508	0.012854	0.001247	0.001414	0.015597	0.007491	0.008079
26	0.001595	0.001622	0.005782	0.005782	0.008237	0.000050	0.007903	0.012188	0.001003	0.001073	0.016256	0.005785	0.006273
27	0.000797	0.001325	0.004153	0.004153	0.006363	0.000037	0.006810	0.010137	0.000740	0.000713	0.015723	0.003739	0.003870
28	0.001595	0.001055	0.003868	0.003868	0.005349	0.000027	0.005974	0.008018	0.000677	0.000730	0.014339	0.002912	0.003640
29	0.001595	0.000730	0.002606	0.002606	0.004757	0.000020	0.004936	0.006995	0.000533	0.000653	0.014229	0.002335	0.003493
30	0.011962	0.005354	0.012297	0.012297	0.017635	0.000198	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Liberty County 2017 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.055821	0.052213	0.042145	0.042145	0.078824	0.091142	0.083978	0.031614	0.107326	0.108951	0.016664	0.054796	0.068825
1	0.049442	0.074386	0.057456	0.057456	0.075667	0.090093	0.076580	0.032820	0.098838	0.103650	0.017093	0.056698	0.059543
2	0.050239	0.072547	0.046869	0.046869	0.067199	0.077034	0.075099	0.039904	0.113632	0.111268	0.017428	0.044354	0.047903
3	0.063796	0.068085	0.038317	0.038317	0.063959	0.079629	0.072132	0.035734	0.089706	0.085755	0.016351	0.053668	0.060675
4	0.047049	0.074602	0.043652	0.043652	0.041394	0.062045	0.040955	0.031878	0.101333	0.102451	0.020170	0.064806	0.071965
5	0.043062	0.065895	0.047113	0.047113	0.036596	0.068674	0.042028	0.032138	0.056427	0.056032	0.010539	0.056252	0.057263
6	0.045455	0.057864	0.041575	0.041575	0.032532	0.055132	0.043047	0.023869	0.053431	0.050813	0.019997	0.057525	0.058116
7	0.040670	0.050023	0.036974	0.036974	0.035230	0.072004	0.039560	0.017559	0.069221	0.071436	0.003389	0.063625	0.060032
8	0.034290	0.043182	0.038236	0.038236	0.039392	0.069145	0.049382	0.031958	0.048059	0.048826	0.005994	0.032744	0.030871
9	0.029506	0.038017	0.030499	0.030499	0.039680	0.062851	0.049899	0.027028	0.017683	0.017043	0.022758	0.021855	0.019997
10	0.059011	0.033853	0.027201	0.027201	0.041020	0.044016	0.043545	0.078002	0.017940	0.016190	0.038819	0.028546	0.027428
11	0.055821	0.049455	0.050533	0.050533	0.050566	0.038149	0.041402	0.063658	0.044072	0.041381	0.052497	0.026198	0.024805
12	0.060606	0.052808	0.050330	0.050330	0.030779	0.028742	0.036224	0.054189	0.028590	0.027061	0.041177	0.087920	0.078722
13	0.057416	0.044885	0.049638	0.049638	0.029860	0.029906	0.039417	0.045716	0.030257	0.030204	0.063961	0.056383	0.050902
14	0.055024	0.042019	0.044425	0.044425	0.038819	0.030838	0.029111	0.050432	0.023951	0.025697	0.048354	0.048250	0.043087
15	0.035088	0.031095	0.046991	0.046991	0.035967	0.028980	0.034482	0.045640	0.018410	0.019228	0.045680	0.028953	0.024421
16	0.044657	0.030555	0.047032	0.047032	0.041037	0.026572	0.038448	0.048454	0.014718	0.015792	0.030061	0.022498	0.021618
17	0.040670	0.026120	0.047968	0.047968	0.047968	0.018212	0.033726	0.058821	0.013232	0.013489	0.056177	0.018760	0.016864
18	0.023126	0.021875	0.045566	0.045566	0.028106	0.011607	0.017894	0.047873	0.013138	0.013534	0.087043	0.025502	0.023545
19	0.025518	0.016954	0.034368	0.034368	0.022635	0.006198	0.016732	0.030019	0.010719	0.009828	0.039384	0.035354	0.032228
20	0.021531	0.014412	0.027486	0.027486	0.020051	0.002680	0.014288	0.019410	0.009528	0.009369	0.065558	0.027142	0.024374
21	0.007177	0.009978	0.020604	0.020604	0.015338	0.003551	0.012169	0.024501	0.003893	0.004506	0.034386	0.020163	0.018389
22	0.015152	0.006976	0.019627	0.019627	0.015262	0.000636	0.013276	0.027421	0.004563	0.004678	0.037837	0.013407	0.012671
23	0.006380	0.004759	0.013071	0.013071	0.011438	0.001134	0.006577	0.016877	0.002344	0.002323	0.039588	0.012108	0.012375
24	0.007974	0.004516	0.013519	0.013519	0.009950	0.000160	0.007616	0.013002	0.002225	0.002388	0.023454	0.012069	0.011774
25	0.007974	0.002839	0.010099	0.010099	0.006052	0.000234	0.006794	0.010264	0.001247	0.001414	0.022808	0.007491	0.008079
26	0.001595	0.001622	0.005782	0.005782	0.005200	0.000182	0.008420	0.012742	0.001003	0.001073	0.015103	0.005785	0.006273
27	0.000797	0.001325	0.004153	0.004153	0.007295	0.000215	0.008562	0.014199	0.000740	0.000713	0.022934	0.003739	0.003870
28	0.001595	0.001055	0.003868	0.003868	0.008928	0.000108	0.004271	0.010231	0.000677	0.000730	0.028466	0.002912	0.003640
29	0.001595	0.000730	0.002606	0.002606	0.005620	0.000040	0.004325	0.010633	0.000533	0.000653	0.025257	0.002335	0.003493
30	0.011962	0.005354	0.012297	0.012297	0.017635	0.000091	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Liberty County 2018 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.055821	0.052213	0.042145	0.042145	0.056764	0.056764	0.056764	0.059441	0.107326	0.108951	0.059441	0.054796	0.068825
1	0.049442	0.074386	0.057456	0.057456	0.078327	0.090363	0.083431	0.031402	0.098838	0.103650	0.016783	0.056698	0.059543
2	0.050239	0.072547	0.046869	0.046869	0.075191	0.089323	0.076081	0.032600	0.113632	0.111268	0.017214	0.044354	0.047903
3	0.063796	0.068085	0.038317	0.038317	0.066776	0.076375	0.074609	0.039636	0.089706	0.085755	0.017551	0.053668	0.060675
4	0.047049	0.074602	0.043652	0.043652	0.063556	0.078948	0.071662	0.035495	0.101333	0.102451	0.016467	0.064806	0.071965
5	0.043062	0.065895	0.047113	0.047113	0.040595	0.060250	0.040093	0.031371	0.056427	0.056032	0.020168	0.056252	0.057263
6	0.045455	0.057864	0.041575	0.041575	0.035413	0.065287	0.040533	0.031332	0.053431	0.050813	0.010463	0.057525	0.058116
7	0.040670	0.050023	0.036974	0.036974	0.031480	0.052413	0.041516	0.023270	0.069221	0.071436	0.019852	0.063625	0.060032
8	0.034290	0.043182	0.038236	0.038236	0.033634	0.066986	0.037578	0.016956	0.048059	0.048826	0.003340	0.032744	0.030871
9	0.029506	0.038017	0.030499	0.030499	0.037606	0.064326	0.046908	0.030862	0.017683	0.017043	0.005908	0.021855	0.019997
10	0.059011	0.033853	0.027201	0.027201	0.037881	0.058471	0.047399	0.026101	0.017940	0.016190	0.022431	0.028546	0.027428
11	0.055821	0.049455	0.050533	0.050533	0.038627	0.040052	0.040731	0.074609	0.044072	0.041381	0.037983	0.026198	0.024805
12	0.060606	0.052808	0.050330	0.050330	0.047616	0.034712	0.038727	0.060889	0.028590	0.027061	0.051366	0.087920	0.078722
13	0.057416	0.044885	0.049638	0.049638	0.028583	0.025567	0.033357	0.051333	0.030257	0.030204	0.039996	0.056383	0.050902
14	0.055024	0.042019	0.044425	0.044425	0.027729	0.026602	0.036297	0.043307	0.023951	0.025697	0.062126	0.048250	0.043087
15	0.035088	0.031095	0.046991	0.046991	0.036049	0.027432	0.026806	0.047774	0.018410	0.019228	0.046967	0.028953	0.024421
16	0.044657	0.030555	0.047032	0.047032	0.032933	0.025188	0.031252	0.042815	0.014718	0.015792	0.044042	0.022498	0.021618
17	0.040670	0.026120	0.047968	0.047968	0.037575	0.023095	0.034847	0.045455	0.013232	0.013489	0.028983	0.018760	0.016864
18	0.023126	0.021875	0.045566	0.045566	0.043298	0.015458	0.030076	0.054639	0.013138	0.013534	0.053761	0.025502	0.023545
19	0.025518	0.016954	0.034368	0.034368	0.025369	0.009852	0.015958	0.044470	0.010719	0.009828	0.083300	0.035354	0.032228
20	0.021531	0.014412	0.027486	0.027486	0.020137	0.005134	0.014678	0.027609	0.009528	0.009369	0.037408	0.027142	0.024374
21	0.007177	0.009978	0.020604	0.020604	0.017838	0.002220	0.012535	0.017851	0.003893	0.004506	0.062269	0.020163	0.018389
22	0.015152	0.006976	0.019627	0.019627	0.013645	0.002941	0.010676	0.022533	0.004563	0.004678	0.032661	0.013407	0.012671
23	0.006380	0.004759	0.013071	0.013071	0.013379	0.000514	0.011454	0.024967	0.002344	0.002323	0.035668	0.012108	0.012375
24	0.007974	0.004516	0.013519	0.013519	0.010027	0.000916	0.005674	0.015367	0.002225	0.002388	0.037319	0.012069	0.011774
25	0.007974	0.002839	0.010099	0.010099	0.008723	0.000129	0.006571	0.011838	0.001247	0.001414	0.022110	0.007491	0.008079
26	0.001595	0.001622	0.005782	0.005782	0.005227	0.000184	0.005762	0.009251	0.001003	0.001073	0.021337	0.005785	0.006273
27	0.000797	0.001325	0.004153	0.004153	0.004490	0.000144	0.007142	0.011484	0.000740	0.000713	0.014129	0.003739	0.003870
28	0.001595	0.001055	0.003868	0.003868	0.006300	0.000169	0.007262	0.012798	0.000677	0.000730	0.021455	0.002912	0.003640
29	0.001595	0.000730	0.002606	0.002606	0.007594	0.000083	0.003561	0.009127	0.000533	0.000653	0.026427	0.002335	0.003493
30	0.011962	0.005354	0.012297	0.012297	0.017635	0.000101	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Liberty County 2020 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.055821	0.052213	0.042145	0.042145	0.056623	0.056623	0.056623	0.059505	0.107326	0.108951	0.059505	0.054796	0.068825
1	0.049442	0.074386	0.057456	0.057456	0.058906	0.058781	0.059000	0.060992	0.098838	0.103650	0.061446	0.056698	0.059543
2	0.050239	0.072547	0.046869	0.046869	0.055787	0.055441	0.055725	0.058218	0.113632	0.111268	0.059616	0.044354	0.047903
3	0.063796	0.068085	0.038317	0.038317	0.076979	0.088257	0.081903	0.030756	0.089706	0.085755	0.016832	0.053668	0.060675
4	0.047049	0.074602	0.043652	0.043652	0.073896	0.087241	0.074688	0.031930	0.101333	0.102451	0.017265	0.064806	0.071965
5	0.043062	0.065895	0.047113	0.047113	0.064800	0.073271	0.072235	0.038481	0.056427	0.056032	0.017480	0.056252	0.057263
6	0.045455	0.057864	0.041575	0.041575	0.060109	0.072950	0.067439	0.033841	0.053431	0.050813	0.016168	0.057525	0.058116
7	0.040670	0.050023	0.036974	0.036974	0.037895	0.054587	0.037185	0.029629	0.069221	0.071436	0.019658	0.063625	0.060032
8	0.034290	0.043182	0.038236	0.038236	0.032631	0.058063	0.037061	0.029329	0.048059	0.048826	0.010126	0.032744	0.030871
9	0.029506	0.038017	0.030499	0.030499	0.028626	0.045687	0.037403	0.021577	0.017683	0.017043	0.019072	0.021855	0.019997
10	0.059011	0.033853	0.027201	0.027201	0.030584	0.058389	0.033855	0.015723	0.017940	0.016190	0.003209	0.028546	0.027428
11	0.055821	0.049455	0.050533	0.050533	0.033749	0.055020	0.041655	0.028360	0.044072	0.041381	0.005636	0.026198	0.024805
12	0.060606	0.052808	0.050330	0.050330	0.033542	0.048997	0.041464	0.023756	0.028590	0.027061	0.021238	0.087920	0.078722
13	0.057416	0.044885	0.049638	0.049638	0.033749	0.032921	0.035112	0.067292	0.030257	0.030204	0.035704	0.056383	0.050902
14	0.055024	0.042019	0.044425	0.044425	0.041041	0.027942	0.032880	0.054391	0.023951	0.025697	0.047926	0.048250	0.043087
15	0.035088	0.031095	0.046991	0.046991	0.024637	0.020580	0.028321	0.045855	0.018410	0.019228	0.037318	0.028953	0.024421
16	0.044657	0.030555	0.047032	0.047032	0.023580	0.020997	0.030362	0.038331	0.014718	0.015792	0.057546	0.022498	0.021618
17	0.040670	0.026120	0.047968	0.047968	0.030235	0.021194	0.022079	0.041875	0.013232	0.013489	0.043179	0.018760	0.016864
18	0.023126	0.021875	0.045566	0.045566	0.027245	0.019074	0.025355	0.037181	0.013138	0.013534	0.040195	0.025502	0.023545
19	0.025518	0.016954	0.034368	0.034368	0.030654	0.017111	0.027831	0.039087	0.010719	0.009828	0.026252	0.035354	0.032228
20	0.021531	0.014412	0.027486	0.027486	0.034835	0.011221	0.023655	0.046548	0.009528	0.009369	0.048337	0.027142	0.024374
21	0.007177	0.009978	0.020604	0.020604	0.020123	0.006993	0.012353	0.037509	0.003893	0.004506	0.074328	0.020163	0.018389
22	0.015152	0.006976	0.019627	0.019627	0.015973	0.003645	0.011362	0.023287	0.004563	0.004678	0.033379	0.013407	0.012671
23	0.006380	0.004759	0.013071	0.013071	0.013951	0.001543	0.009553	0.014916	0.002344	0.002323	0.055151	0.012108	0.012375
24	0.007974	0.004516	0.013519	0.013519	0.010520	0.001999	0.008005	0.018640	0.002225	0.002388	0.028706	0.012069	0.011774
25	0.007974	0.002839	0.010099	0.010099	0.010315	0.000349	0.008588	0.020653	0.001247	0.001414	0.031349	0.007491	0.008079
26	0.001595	0.001622	0.005782	0.005782	0.007620	0.000609	0.004188	0.012591	0.001003	0.001073	0.032556	0.005785	0.006273
27	0.000797	0.001325	0.004153	0.004153	0.006533	0.000084	0.004770	0.009602	0.000740	0.000713	0.019139	0.003739	0.003870
28	0.001595	0.001055	0.003868	0.003868	0.003915	0.000120	0.004184	0.007503	0.000677	0.000730	0.018470	0.002912	0.003640
29	0.001595	0.000730	0.002606	0.002606	0.003315	0.000091	0.005102	0.009226	0.000533	0.000653	0.012139	0.002335	0.003493
30	0.011962	0.005354	0.012297	0.012297	0.017635	0.000219	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Liberty County 2023 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.055821	0.052213	0.042145	0.042145	0.055916	0.055916	0.055916	0.058180	0.107326	0.108951	0.058180	0.054796	0.068825
1	0.049442	0.074386	0.057456	0.057456	0.056272	0.056177	0.056259	0.058179	0.098838	0.103650	0.058578	0.056698	0.059543
2	0.050239	0.072547	0.046869	0.046869	0.053703	0.053595	0.053754	0.056574	0.113632	0.111268	0.057461	0.044354	0.047903
3	0.063796	0.068085	0.038317	0.038317	0.055079	0.054952	0.055275	0.057472	0.089706	0.085755	0.058467	0.053668	0.060675
4	0.047049	0.074602	0.043652	0.043652	0.057299	0.057046	0.057596	0.058908	0.101333	0.102451	0.060375	0.064806	0.071965
5	0.043062	0.065895	0.047113	0.047113	0.053587	0.052974	0.053667	0.055701	0.056427	0.056032	0.058115	0.056252	0.057263
6	0.045455	0.057864	0.041575	0.041575	0.072106	0.081694	0.076767	0.028881	0.053431	0.050813	0.016156	0.057525	0.058116
7	0.040670	0.050023	0.036974	0.036974	0.067500	0.078131	0.068119	0.029440	0.069221	0.071436	0.016327	0.063625	0.060032
8	0.034290	0.043182	0.038236	0.038236	0.057694	0.063477	0.064077	0.034826	0.048059	0.048826	0.016279	0.032744	0.030871
9	0.029506	0.038017	0.030499	0.030499	0.052840	0.062167	0.059003	0.030340	0.017683	0.017043	0.014941	0.021855	0.019997
10	0.059011	0.033853	0.027201	0.027201	0.032885	0.045715	0.032079	0.026323	0.017940	0.016190	0.018033	0.028546	0.027428
11	0.055821	0.049455	0.050533	0.050533	0.027950	0.047838	0.031525	0.025805	0.044072	0.041381	0.009215	0.026198	0.024805
12	0.060606	0.052808	0.050330	0.050330	0.024205	0.037017	0.031373	0.018806	0.028590	0.027061	0.017221	0.087920	0.078722
13	0.057416	0.044885	0.049638	0.049638	0.025189	0.045712	0.027598	0.013446	0.030257	0.030204	0.002852	0.056383	0.050902
14	0.055024	0.042019	0.044425	0.044425	0.027435	0.042348	0.033477	0.024021	0.023951	0.025697	0.004971	0.048250	0.043087
15	0.035088	0.031095	0.046991	0.046991	0.026908	0.037037	0.032845	0.019936	0.018410	0.019228	0.018594	0.028953	0.024421
16	0.044657	0.030555	0.047032	0.047032	0.026714	0.024469	0.027413	0.055915	0.014718	0.015792	0.031004	0.022498	0.021618
17	0.040670	0.026120	0.047968	0.047968	0.032058	0.020412	0.025303	0.044760	0.013232	0.013489	0.041292	0.018760	0.016864
18	0.023126	0.021875	0.045566	0.045566	0.018731	0.014509	0.021163	0.037012	0.013138	0.013534	0.031647	0.025502	0.023545
19	0.025518	0.016954	0.034368	0.034368	0.017689	0.014544	0.022359	0.030639	0.010719	0.009828	0.048417	0.035354	0.032228
20	0.021531	0.014412	0.027486	0.027486	0.022068	0.014159	0.015781	0.032824	0.009528	0.009369	0.035754	0.027142	0.024374
21	0.007177	0.009978	0.020604	0.020604	0.019618	0.012516	0.017856	0.028859	0.003893	0.004506	0.033019	0.020163	0.018389
22	0.015152	0.006976	0.019627	0.019627	0.021770	0.011016	0.019305	0.030050	0.004563	0.004678	0.021400	0.013407	0.012671
23	0.006380	0.004759	0.013071	0.013071	0.024396	0.007096	0.016162	0.035423	0.002344	0.002323	0.039074	0.012108	0.012375
24	0.007974	0.004516	0.013519	0.013519	0.013900	0.004343	0.008313	0.028262	0.002225	0.002388	0.059603	0.012069	0.011774
25	0.007974	0.002839	0.010099	0.010099	0.010880	0.002220	0.007530	0.017378	0.001247	0.001414	0.026560	0.007491	0.008079
26	0.001595	0.001622	0.005782	0.005782	0.009369	0.000923	0.006234	0.011017	0.001003	0.001073	0.043513	0.005785	0.006273
27	0.000797	0.001325	0.004153	0.004153	0.006966	0.001173	0.005145	0.013629	0.000740	0.000713	0.022466	0.003739	0.003870
28	0.001595	0.001055	0.003868	0.003868	0.006734	0.000201	0.005435	0.014955	0.000677	0.000730	0.024344	0.002912	0.003640
29	0.001595	0.000730	0.002606	0.002606	0.004904	0.000344	0.002609	0.009023	0.000533	0.000653	0.025065	0.002335	0.003493
30	0.011962	0.005354	0.012297	0.012297	0.017635	0.000280	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Liberty County 2026 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.055821	0.052213	0.042145	0.042145	0.053311	0.053311	0.053311	0.055878	0.107326	0.108951	0.055878	0.054796	0.068825
1	0.049442	0.074386	0.057456	0.057456	0.053213	0.053082	0.053192	0.055727	0.098838	0.103650	0.056089	0.056698	0.059543
2	0.050239	0.072547	0.046869	0.046869	0.053415	0.053131	0.053387	0.055943	0.113632	0.111268	0.056737	0.044354	0.047903
3	0.063796	0.068085	0.038317	0.038317	0.054397	0.054004	0.054308	0.056503	0.089706	0.085755	0.058147	0.053668	0.060675
4	0.047049	0.074602	0.043652	0.043652	0.054744	0.054257	0.054641	0.056502	0.101333	0.102451	0.058545	0.064806	0.071965
5	0.043062	0.065895	0.047113	0.047113	0.051675	0.051124	0.051612	0.054469	0.056427	0.056032	0.056986	0.056252	0.057263
6	0.045455	0.057864	0.041575	0.041575	0.051827	0.051090	0.051839	0.054374	0.053431	0.050813	0.057096	0.057525	0.058116
7	0.040670	0.050023	0.036974	0.036974	0.052672	0.051595	0.052695	0.054749	0.069221	0.071436	0.058059	0.063625	0.060032
8	0.034290	0.043182	0.038236	0.038236	0.048125	0.046622	0.047904	0.050848	0.048059	0.048826	0.055022	0.032744	0.030871
9	0.029506	0.038017	0.030499	0.030499	0.064014	0.070939	0.067696	0.026131	0.017683	0.017043	0.015178	0.021855	0.019997
10	0.059011	0.033853	0.027201	0.027201	0.059196	0.066851	0.059289	0.026395	0.017940	0.016190	0.015220	0.028546	0.027428
11	0.055821	0.049455	0.050533	0.050533	0.050025	0.053616	0.055111	0.030946	0.044072	0.041381	0.015055	0.026198	0.024805
12	0.060606	0.052808	0.050330	0.050330	0.045285	0.051800	0.050126	0.026719	0.028590	0.027061	0.013710	0.087920	0.078722
13	0.057416	0.044885	0.049638	0.049638	0.027519	0.037038	0.026572	0.022762	0.030257	0.030204	0.016287	0.056383	0.050902
14	0.055024	0.042019	0.044425	0.044425	0.023114	0.038227	0.025789	0.022114	0.023951	0.025697	0.008257	0.048250	0.043087
15	0.035088	0.031095	0.046991	0.046991	0.019768	0.029133	0.025323	0.015965	0.018410	0.019228	0.015311	0.028953	0.024421
16	0.044657	0.030555	0.047032	0.047032	0.020334	0.035504	0.022005	0.011312	0.014718	0.015792	0.002516	0.022498	0.021618
17	0.040670	0.026120	0.047968	0.047968	0.021884	0.032433	0.026359	0.020025	0.013232	0.013489	0.004349	0.018760	0.016864
18	0.023126	0.021875	0.045566	0.045566	0.020946	0.027559	0.025198	0.016314	0.013138	0.013534	0.016009	0.025502	0.023545
19	0.025518	0.016954	0.034368	0.034368	0.020545	0.017950	0.020764	0.045336	0.010719	0.009828	0.026480	0.035354	0.032228
20	0.021531	0.014412	0.027486	0.027486	0.024052	0.014542	0.018668	0.035616	0.009528	0.009369	0.034700	0.027142	0.024374
21	0.007177	0.009978	0.020604	0.020604	0.013883	0.010189	0.015413	0.029179	0.003893	0.004506	0.026380	0.020163	0.018389
22	0.015152	0.006976	0.019627	0.019627	0.012940	0.010052	0.016058	0.023923	0.004563	0.004678	0.040035	0.013407	0.012671
23	0.006380	0.004759	0.013071	0.013071	0.015951	0.009652	0.011191	0.025391	0.002344	0.002323	0.029321	0.012108	0.012375
24	0.007974	0.004516	0.013519	0.013519	0.014005	0.008408	0.012497	0.022116	0.002225	0.002388	0.026858	0.012069	0.011774
25	0.007974	0.002839	0.010099	0.010099	0.015337	0.007281	0.013322	0.022806	0.001247	0.001414	0.017266	0.007491	0.008079
26	0.001595	0.001622	0.005782	0.005782	0.016979	0.004626	0.011010	0.026631	0.001003	0.001073	0.031264	0.005785	0.006273
27	0.000797	0.001325	0.004153	0.004153	0.009554	0.002789	0.005589	0.021048	0.000740	0.000713	0.047300	0.003739	0.003870
28	0.001595	0.001055	0.003868	0.003868	0.007379	0.001402	0.004990	0.012815	0.000677	0.000730	0.020905	0.002912	0.003640
29	0.001595	0.000730	0.002606	0.002606	0.006276	0.000575	0.004078	0.008047	0.000533	0.000653	0.033963	0.002335	0.003493
30	0.011962	0.005354	0.012297	0.012297	0.017635	0.001218	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Liberty County 2027 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.055821	0.052213	0.042145	0.042145	0.052770	0.052770	0.052770	0.055385	0.107326	0.108951	0.055385	0.054796	0.068825
1	0.049442	0.074386	0.057456	0.057456	0.052814	0.052631	0.052756	0.055139	0.098838	0.103650	0.056488	0.056698	0.059543
2	0.050239	0.072547	0.046869	0.046869	0.052718	0.052406	0.052638	0.054991	0.113632	0.111268	0.056702	0.044354	0.047903
3	0.063796	0.068085	0.038317	0.038317	0.052918	0.052454	0.052831	0.055204	0.089706	0.085755	0.057356	0.053668	0.060675
4	0.047049	0.074602	0.043652	0.043652	0.053891	0.053316	0.053743	0.055756	0.101333	0.102451	0.058781	0.064806	0.071965
5	0.043062	0.065895	0.047113	0.047113	0.053660	0.052939	0.053478	0.055275	0.056427	0.056032	0.058720	0.056252	0.057263
6	0.045455	0.057864	0.041575	0.041575	0.050110	0.049293	0.049951	0.052822	0.053431	0.050813	0.056704	0.057525	0.058116
7	0.040670	0.050023	0.036974	0.036974	0.050257	0.049260	0.050171	0.052730	0.069221	0.071436	0.056813	0.063625	0.060032
8	0.034290	0.043182	0.038236	0.038236	0.050525	0.049151	0.050427	0.052628	0.048059	0.048826	0.057311	0.032744	0.030871
9	0.029506	0.038017	0.030499	0.030499	0.046163	0.044413	0.045842	0.048878	0.017683	0.017043	0.054314	0.021855	0.019997
10	0.059011	0.033853	0.027201	0.027201	0.061404	0.067579	0.064781	0.025119	0.017940	0.016190	0.014982	0.028546	0.027428
11	0.055821	0.049455	0.050533	0.050533	0.056161	0.062912	0.056092	0.025148	0.044072	0.041381	0.014903	0.026198	0.024805
12	0.060606	0.052808	0.050330	0.050330	0.047461	0.050457	0.052138	0.029484	0.028590	0.027061	0.014741	0.087920	0.078722
13	0.057416	0.044885	0.049638	0.049638	0.042489	0.048150	0.046877	0.025230	0.030257	0.030204	0.013316	0.056383	0.050902
14	0.055024	0.042019	0.044425	0.044425	0.025820	0.034428	0.024850	0.021493	0.023951	0.025697	0.015819	0.048250	0.043087
15	0.035088	0.031095	0.046991	0.046991	0.021687	0.035534	0.024118	0.020881	0.018410	0.019228	0.008020	0.028953	0.024421
16	0.044657	0.030555	0.047032	0.047032	0.018340	0.026744	0.023407	0.014939	0.014718	0.015792	0.014749	0.022498	0.021618
17	0.040670	0.026120	0.047968	0.047968	0.018865	0.032592	0.020340	0.010585	0.013232	0.013489	0.002423	0.018760	0.016864
18	0.023126	0.021875	0.045566	0.045566	0.020074	0.029399	0.024077	0.018568	0.013138	0.013534	0.004155	0.025502	0.023545
19	0.025518	0.016954	0.034368	0.034368	0.019213	0.024981	0.023017	0.015126	0.010719	0.009828	0.015295	0.035354	0.032228
20	0.021531	0.014412	0.027486	0.027486	0.018630	0.016064	0.018740	0.041651	0.009528	0.009369	0.025089	0.027142	0.024374
21	0.007177	0.009978	0.020604	0.020604	0.021810	0.013014	0.016849	0.032722	0.003893	0.004506	0.032878	0.020163	0.018389
22	0.015152	0.006976	0.019627	0.019627	0.012589	0.009118	0.013911	0.026807	0.004563	0.004678	0.024995	0.013407	0.012671
23	0.006380	0.004759	0.013071	0.013071	0.011598	0.008880	0.014318	0.021775	0.002344	0.002323	0.037614	0.012108	0.012375
24	0.007974	0.004516	0.013519	0.013519	0.014297	0.008526	0.009979	0.023111	0.002225	0.002388	0.027548	0.012069	0.011774
25	0.007974	0.002839	0.010099	0.010099	0.012553	0.007427	0.011144	0.020130	0.001247	0.001414	0.025235	0.007491	0.008079
26	0.001595	0.001622	0.005782	0.005782	0.013586	0.006348	0.011734	0.020564	0.001003	0.001073	0.016085	0.005785	0.006273
27	0.000797	0.001325	0.004153	0.004153	0.015041	0.004033	0.009698	0.024014	0.000740	0.000713	0.029126	0.003739	0.003870
28	0.001595	0.001055	0.003868	0.003868	0.008463	0.002432	0.004923	0.018979	0.000677	0.000730	0.044065	0.002912	0.003640
29	0.001595	0.000730	0.002606	0.002606	0.006459	0.001206	0.004341	0.011447	0.000533	0.000653	0.019310	0.002335	0.003493
30	0.011962	0.005354	0.012297	0.012297	0.017635	0.001542	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Montgomery County 2011 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.060102	0.106494	0.079624	0.079624	0.036180	0.074697	0.043899	0.020412	0.107326	0.108951	0.017572	0.054796	0.068825
1	0.066549	0.098530	0.076806	0.076806	0.039841	0.101513	0.042214	0.015110	0.098838	0.103650	0.002979	0.056698	0.059543
2	0.058230	0.081980	0.056214	0.056214	0.046623	0.104812	0.055843	0.028331	0.113632	0.111268	0.005313	0.044354	0.047903
3	0.068317	0.080777	0.055472	0.055472	0.049281	0.102921	0.059585	0.025227	0.089706	0.085755	0.020619	0.053668	0.060675
4	0.053135	0.082808	0.056362	0.056362	0.052966	0.076456	0.054774	0.076490	0.101333	0.102451	0.035762	0.064806	0.071965
5	0.060726	0.072633	0.059676	0.059676	0.068397	0.072053	0.055227	0.064970	0.056427	0.056032	0.048854	0.056252	0.057263
6	0.056463	0.067981	0.049253	0.049253	0.042648	0.057371	0.050452	0.056933	0.053431	0.050813	0.038874	0.057525	0.058116
7	0.051159	0.054177	0.041543	0.041543	0.042736	0.064267	0.058689	0.049088	0.069221	0.071436	0.060535	0.063625	0.060032
8	0.028803	0.043392	0.039083	0.039083	0.057372	0.070033	0.045203	0.055546	0.048059	0.048826	0.046135	0.032744	0.030871
9	0.024436	0.036786	0.033685	0.033685	0.054751	0.068493	0.055453	0.052116	0.017683	0.017043	0.044240	0.021855	0.019997
10	0.052927	0.029062	0.025809	0.025809	0.065557	0.068653	0.065744	0.057687	0.017940	0.016190	0.029414	0.028546	0.027428
11	0.046584	0.040771	0.045180	0.045180	0.078557	0.049889	0.060342	0.072218	0.044072	0.041381	0.055786	0.026198	0.024805
12	0.062494	0.037624	0.045799	0.045799	0.047578	0.034391	0.034339	0.060105	0.028590	0.027061	0.086656	0.087920	0.078722
13	0.051055	0.030082	0.041770	0.041770	0.039627	0.019471	0.033557	0.038712	0.030257	0.030204	0.039532	0.056383	0.050902
14	0.045336	0.026070	0.035821	0.035821	0.036599	0.009178	0.030650	0.026002	0.023951	0.025697	0.066825	0.048250	0.043087
15	0.031923	0.022208	0.038412	0.038412	0.029292	0.013218	0.027866	0.034289	0.018410	0.019228	0.035417	0.028953	0.024421
16	0.038578	0.018665	0.035159	0.035159	0.030064	0.002472	0.031547	0.039908	0.014718	0.015792	0.039586	0.022498	0.021618
17	0.028907	0.015398	0.035080	0.035080	0.023718	0.004862	0.016693	0.025686	0.013232	0.013489	0.041853	0.018760	0.016864
18	0.021628	0.012350	0.032402	0.032402	0.021178	0.000730	0.020301	0.020470	0.013138	0.013534	0.025183	0.025502	0.023545
19	0.017365	0.009965	0.024282	0.024282	0.013178	0.001112	0.018896	0.016540	0.010719	0.009828	0.024551	0.035354	0.032228
20	0.013622	0.007440	0.018456	0.018456	0.011799	0.000936	0.024538	0.021137	0.009528	0.009369	0.016394	0.027142	0.024374
21	0.010606	0.005373	0.012996	0.012996	0.017000	0.001181	0.026242	0.024395	0.003893	0.004506	0.025289	0.020163	0.018389
22	0.007175	0.003961	0.013048	0.013048	0.021289	0.000616	0.013673	0.017998	0.004563	0.004678	0.031470	0.013407	0.012671
23	0.004783	0.002340	0.008626	0.008626	0.013982	0.000249	0.014528	0.019271	0.002344	0.002323	0.028159	0.012108	0.012375
24	0.005407	0.001992	0.008068	0.008068	0.009457	0.000070	0.013551	0.017751	0.002225	0.002388	0.025783	0.012069	0.011774
25	0.004575	0.001331	0.006184	0.006184	0.007992	0.000024	0.010508	0.012854	0.001247	0.001414	0.015597	0.007491	0.008079
26	0.003327	0.001128	0.004317	0.004317	0.008237	0.000050	0.007903	0.012188	0.001003	0.001073	0.016256	0.005785	0.006273
27	0.001976	0.000841	0.003114	0.003114	0.006363	0.000037	0.006810	0.010137	0.000740	0.000713	0.015723	0.003739	0.003870
28	0.001144	0.000778	0.002355	0.002355	0.005349	0.000027	0.005974	0.008018	0.000677	0.000730	0.014339	0.002912	0.003640
29	0.001664	0.000733	0.002259	0.002259	0.004757	0.000020	0.004936	0.006995	0.000533	0.000653	0.014229	0.002335	0.003493
30	0.021004	0.006328	0.013144	0.013144	0.017635	0.000198	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Montgomery County 2017 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.060102	0.106494	0.079624	0.079624	0.078824	0.091142	0.083978	0.031614	0.107326	0.108951	0.016664	0.054796	0.068825
1	0.066549	0.098530	0.076806	0.076806	0.075667	0.090093	0.076580	0.032820	0.098838	0.103650	0.017093	0.056698	0.059543
2	0.058230	0.081980	0.056214	0.056214	0.067199	0.077034	0.075099	0.039904	0.113632	0.111268	0.017428	0.044354	0.047903
3	0.068317	0.080777	0.055472	0.055472	0.063959	0.079629	0.072132	0.035734	0.089706	0.085755	0.016351	0.053668	0.060675
4	0.053135	0.082808	0.056362	0.056362	0.041394	0.062045	0.040955	0.031878	0.101333	0.102451	0.020170	0.064806	0.071965
5	0.060726	0.072633	0.059676	0.059676	0.036596	0.068674	0.042028	0.032138	0.056427	0.056032	0.010539	0.056252	0.057263
6	0.056463	0.067981	0.049253	0.049253	0.032532	0.055132	0.043047	0.023869	0.053431	0.050813	0.019997	0.057525	0.058116
7	0.051159	0.054177	0.041543	0.041543	0.035230	0.072004	0.039560	0.017559	0.069221	0.071436	0.003389	0.063625	0.060032
8	0.028803	0.043392	0.039083	0.039083	0.039392	0.069145	0.049382	0.031958	0.048059	0.048826	0.005994	0.032744	0.030871
9	0.024436	0.036786	0.033685	0.033685	0.039680	0.062851	0.049899	0.027028	0.017683	0.017043	0.022758	0.021855	0.019997
10	0.052927	0.029062	0.025809	0.025809	0.041020	0.044016	0.043545	0.078002	0.017940	0.016190	0.038819	0.028546	0.027428
11	0.046584	0.040771	0.045180	0.045180	0.050566	0.038149	0.041402	0.063658	0.044072	0.041381	0.052497	0.026198	0.024805
12	0.062494	0.037624	0.045799	0.045799	0.030779	0.028742	0.036224	0.054189	0.028590	0.027061	0.041177	0.087920	0.078722
13	0.051055	0.030082	0.041770	0.041770	0.029860	0.029906	0.039417	0.045716	0.030257	0.030204	0.063961	0.056383	0.050902
14	0.045336	0.026070	0.035821	0.035821	0.038819	0.030838	0.029111	0.050432	0.023951	0.025697	0.048354	0.048250	0.043087
15	0.031923	0.022208	0.038412	0.038412	0.035967	0.028980	0.034482	0.045640	0.018410	0.019228	0.045680	0.028953	0.024421
16	0.038578	0.018665	0.035159	0.035159	0.041037	0.026572	0.038448	0.048454	0.014718	0.015792	0.030061	0.022498	0.021618
17	0.028907	0.015398	0.035080	0.035080	0.047968	0.018212	0.033726	0.058821	0.013232	0.013489	0.056177	0.018760	0.016864
18	0.021628	0.012350	0.032402	0.032402	0.028106	0.011607	0.017894	0.047873	0.013138	0.013534	0.087043	0.025502	0.023545
19	0.017365	0.009965	0.024282	0.024282	0.022635	0.006198	0.016732	0.030019	0.010719	0.009828	0.039384	0.035354	0.032228
20	0.013622	0.007440	0.018456	0.018456	0.020051	0.002680	0.014288	0.019410	0.009528	0.009369	0.065558	0.027142	0.024374
21	0.010606	0.005373	0.012996	0.012996	0.015338	0.003551	0.012169	0.024501	0.003893	0.004506	0.034386	0.020163	0.018389
22	0.007175	0.003961	0.013048	0.013048	0.015262	0.000636	0.013276	0.027421	0.004563	0.004678	0.037837	0.013407	0.012671
23	0.004783	0.002340	0.008626	0.008626	0.011438	0.001134	0.006577	0.016877	0.002344	0.002323	0.039588	0.012108	0.012375
24	0.005407	0.001992	0.008068	0.008068	0.009950	0.000160	0.007616	0.013002	0.002225	0.002388	0.023454	0.012069	0.011774
25	0.004575	0.001331	0.006184	0.006184	0.006052	0.000234	0.006794	0.010264	0.001247	0.001414	0.022808	0.007491	0.008079
26	0.003327	0.001128	0.004317	0.004317	0.005200	0.000182	0.008420	0.012742	0.001003	0.001073	0.015103	0.005785	0.006273
27	0.001976	0.000841	0.003114	0.003114	0.007295	0.000215	0.008562	0.014199	0.000740	0.000713	0.022934	0.003739	0.003870
28	0.001144	0.000778	0.002355	0.002355	0.008928	0.000108	0.004271	0.010231	0.000677	0.000730	0.028466	0.002912	0.003640
29	0.001664	0.000733	0.002259	0.002259	0.005620	0.000040	0.004325	0.010633	0.000533	0.000653	0.025257	0.002335	0.003493
30	0.021004	0.006328	0.013144	0.013144	0.017635	0.000091	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Montgomery County 2018 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.060102	0.106494	0.079624	0.079624	0.056764	0.056764	0.056764	0.059441	0.107326	0.108951	0.059441	0.054796	0.068825
1	0.066549	0.098530	0.076806	0.076806	0.078327	0.090363	0.083431	0.031402	0.098838	0.103650	0.016783	0.056698	0.059543
2	0.058230	0.081980	0.056214	0.056214	0.075191	0.089323	0.076081	0.032600	0.113632	0.111268	0.017214	0.044354	0.047903
3	0.068317	0.080777	0.055472	0.055472	0.066776	0.076375	0.074609	0.039636	0.089706	0.085755	0.017551	0.053668	0.060675
4	0.053135	0.082808	0.056362	0.056362	0.063556	0.078948	0.071662	0.035495	0.101333	0.102451	0.016467	0.064806	0.071965
5	0.060726	0.072633	0.059676	0.059676	0.040595	0.060250	0.040093	0.031371	0.056427	0.056032	0.020168	0.056252	0.057263
6	0.056463	0.067981	0.049253	0.049253	0.035413	0.065287	0.040533	0.031332	0.053431	0.050813	0.010463	0.057525	0.058116
7	0.051159	0.054177	0.041543	0.041543	0.031480	0.052413	0.041516	0.023270	0.069221	0.071436	0.019852	0.063625	0.060032
8	0.028803	0.043392	0.039083	0.039083	0.033634	0.066986	0.037578	0.016956	0.048059	0.048826	0.003340	0.032744	0.030871
9	0.024436	0.036786	0.033685	0.033685	0.037606	0.064326	0.046908	0.030862	0.017683	0.017043	0.005908	0.021855	0.019997
10	0.052927	0.029062	0.025809	0.025809	0.037881	0.058471	0.047399	0.026101	0.017940	0.016190	0.022431	0.028546	0.027428
11	0.046584	0.040771	0.045180	0.045180	0.038627	0.040052	0.040731	0.074609	0.044072	0.041381	0.037983	0.026198	0.024805
12	0.062494	0.037624	0.045799	0.045799	0.047616	0.034712	0.038727	0.060889	0.028590	0.027061	0.051366	0.087920	0.078722
13	0.051055	0.030082	0.041770	0.041770	0.028583	0.025567	0.033357	0.051333	0.030257	0.030204	0.039996	0.056383	0.050902
14	0.045336	0.026070	0.035821	0.035821	0.027729	0.026602	0.036297	0.043307	0.023951	0.025697	0.062126	0.048250	0.043087
15	0.031923	0.022208	0.038412	0.038412	0.036049	0.027432	0.026806	0.047774	0.018410	0.019228	0.046967	0.028953	0.024421
16	0.038578	0.018665	0.035159	0.035159	0.032933	0.025188	0.031252	0.042815	0.014718	0.015792	0.044042	0.022498	0.021618
17	0.028907	0.015398	0.035080	0.035080	0.037575	0.023095	0.034847	0.045455	0.013232	0.013489	0.028983	0.018760	0.016864
18	0.021628	0.012350	0.032402	0.032402	0.043298	0.015458	0.030076	0.054639	0.013138	0.013534	0.053761	0.025502	0.023545
19	0.017365	0.009965	0.024282	0.024282	0.025369	0.009852	0.015958	0.044470	0.010719	0.009828	0.083300	0.035354	0.032228
20	0.013622	0.007440	0.018456	0.018456	0.020137	0.005134	0.014678	0.027609	0.009528	0.009369	0.037408	0.027142	0.024374
21	0.010606	0.005373	0.012996	0.012996	0.017838	0.002220	0.012535	0.017851	0.003893	0.004506	0.062269	0.020163	0.018389
22	0.007175	0.003961	0.013048	0.013048	0.013645	0.002941	0.010676	0.022533	0.004563	0.004678	0.032661	0.013407	0.012671
23	0.004783	0.002340	0.008626	0.008626	0.013379	0.000514	0.011454	0.024967	0.002344	0.002323	0.035668	0.012108	0.012375
24	0.005407	0.001992	0.008068	0.008068	0.010027	0.000916	0.005674	0.015367	0.002225	0.002388	0.037319	0.012069	0.011774
25	0.004575	0.001331	0.006184	0.006184	0.008723	0.000129	0.006571	0.011838	0.001247	0.001414	0.022110	0.007491	0.008079
26	0.003327	0.001128	0.004317	0.004317	0.005227	0.000184	0.005762	0.009251	0.001003	0.001073	0.021337	0.005785	0.006273
27	0.001976	0.000841	0.003114	0.003114	0.004490	0.000144	0.007142	0.011484	0.000740	0.000713	0.014129	0.003739	0.003870
28	0.001144	0.000778	0.002355	0.002355	0.006300	0.000169	0.007262	0.012798	0.000677	0.000730	0.021455	0.002912	0.003640
29	0.001664	0.000733	0.002259	0.002259	0.007594	0.000083	0.003561	0.009127	0.000533	0.000653	0.026427	0.002335	0.003493
30	0.021004	0.006328	0.013144	0.013144	0.017635	0.000101	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Montgomery County 2020 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.060102	0.106494	0.079624	0.079624	0.056623	0.056623	0.056623	0.059505	0.107326	0.108951	0.059505	0.054796	0.068825
1	0.066549	0.098530	0.076806	0.076806	0.058906	0.058781	0.059000	0.060992	0.098838	0.103650	0.061446	0.056698	0.059543
2	0.058230	0.081980	0.056214	0.056214	0.055787	0.055441	0.055725	0.058218	0.113632	0.111268	0.059616	0.044354	0.047903
3	0.068317	0.080777	0.055472	0.055472	0.076979	0.088257	0.081903	0.030756	0.089706	0.085755	0.016832	0.053668	0.060675
4	0.053135	0.082808	0.056362	0.056362	0.073896	0.087241	0.074688	0.031930	0.101333	0.102451	0.017265	0.064806	0.071965
5	0.060726	0.072633	0.059676	0.059676	0.064800	0.073271	0.072235	0.038481	0.056427	0.056032	0.017480	0.056252	0.057263
6	0.056463	0.067981	0.049253	0.049253	0.060109	0.072950	0.067439	0.033841	0.053431	0.050813	0.016168	0.057525	0.058116
7	0.051159	0.054177	0.041543	0.041543	0.037895	0.054587	0.037185	0.029629	0.069221	0.071436	0.019658	0.063625	0.060032
8	0.028803	0.043392	0.039083	0.039083	0.032631	0.058063	0.037061	0.029329	0.048059	0.048826	0.010126	0.032744	0.030871
9	0.024436	0.036786	0.033685	0.033685	0.028626	0.045687	0.037403	0.021577	0.017683	0.017043	0.019072	0.021855	0.019997
10	0.052927	0.029062	0.025809	0.025809	0.030584	0.058389	0.033855	0.015723	0.017940	0.016190	0.003209	0.028546	0.027428
11	0.046584	0.040771	0.045180	0.045180	0.033749	0.055020	0.041655	0.028360	0.044072	0.041381	0.005636	0.026198	0.024805
12	0.062494	0.037624	0.045799	0.045799	0.033542	0.048997	0.041464	0.023756	0.028590	0.027061	0.021238	0.087920	0.078722
13	0.051055	0.030082	0.041770	0.041770	0.033749	0.032921	0.035112	0.067292	0.030257	0.030204	0.035704	0.056383	0.050902
14	0.045336	0.026070	0.035821	0.035821	0.041041	0.027942	0.032880	0.054391	0.023951	0.025697	0.047926	0.048250	0.043087
15	0.031923	0.022208	0.038412	0.038412	0.024637	0.020580	0.028321	0.045855	0.018410	0.019228	0.037318	0.028953	0.024421
16	0.038578	0.018665	0.035159	0.035159	0.023580	0.020997	0.030362	0.038331	0.014718	0.015792	0.057546	0.022498	0.021618
17	0.028907	0.015398	0.035080	0.035080	0.030235	0.021194	0.022079	0.041875	0.013232	0.013489	0.043179	0.018760	0.016864
18	0.021628	0.012350	0.032402	0.032402	0.027245	0.019074	0.025355	0.037181	0.013138	0.013534	0.040195	0.025502	0.023545
19	0.017365	0.009965	0.024282	0.024282	0.030654	0.017111	0.027831	0.039087	0.010719	0.009828	0.026252	0.035354	0.032228
20	0.013622	0.007440	0.018456	0.018456	0.034835	0.011221	0.023655	0.046548	0.009528	0.009369	0.048337	0.027142	0.024374
21	0.010606	0.005373	0.012996	0.012996	0.020123	0.006993	0.012353	0.037509	0.003893	0.004506	0.074328	0.020163	0.018389
22	0.007175	0.003961	0.013048	0.013048	0.015973	0.003645	0.011362	0.023287	0.004563	0.004678	0.033379	0.013407	0.012671
23	0.004783	0.002340	0.008626	0.008626	0.013951	0.001543	0.009553	0.014916	0.002344	0.002323	0.055151	0.012108	0.012375
24	0.005407	0.001992	0.008068	0.008068	0.010520	0.001999	0.008005	0.018640	0.002225	0.002388	0.028706	0.012069	0.011774
25	0.004575	0.001331	0.006184	0.006184	0.010315	0.000349	0.008588	0.020653	0.001247	0.001414	0.031349	0.007491	0.008079
26	0.003327	0.001128	0.004317	0.004317	0.007620	0.000609	0.004188	0.012591	0.001003	0.001073	0.032556	0.005785	0.006273
27	0.001976	0.000841	0.003114	0.003114	0.006533	0.000084	0.004770	0.009602	0.000740	0.000713	0.019139	0.003739	0.003870
28	0.001144	0.000778	0.002355	0.002355	0.003915	0.000120	0.004184	0.007503	0.000677	0.000730	0.018470	0.002912	0.003640
29	0.001664	0.000733	0.002259	0.002259	0.003315	0.000091	0.005102	0.009226	0.000533	0.000653	0.012139	0.002335	0.003493
30	0.021004	0.006328	0.013144	0.013144	0.017635	0.000219	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Montgomery County 2023 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.060102	0.106494	0.079624	0.079624	0.055916	0.055916	0.055916	0.058180	0.107326	0.108951	0.058180	0.054796	0.068825
1	0.066549	0.098530	0.076806	0.076806	0.056272	0.056177	0.056259	0.058179	0.098838	0.103650	0.058578	0.056698	0.059543
2	0.058230	0.081980	0.056214	0.056214	0.053703	0.053595	0.053754	0.056574	0.113632	0.111268	0.057461	0.044354	0.047903
3	0.068317	0.080777	0.055472	0.055472	0.055079	0.054952	0.055275	0.057472	0.089706	0.085755	0.058467	0.053668	0.060675
4	0.053135	0.082808	0.056362	0.056362	0.057299	0.057046	0.057596	0.058908	0.101333	0.102451	0.060375	0.064806	0.071965
5	0.060726	0.072633	0.059676	0.059676	0.053587	0.052974	0.053667	0.055701	0.056427	0.056032	0.058115	0.056252	0.057263
6	0.056463	0.067981	0.049253	0.049253	0.072106	0.081694	0.076767	0.028881	0.053431	0.050813	0.016156	0.057525	0.058116
7	0.051159	0.054177	0.041543	0.041543	0.067500	0.078131	0.068119	0.029440	0.069221	0.071436	0.016327	0.063625	0.060032
8	0.028803	0.043392	0.039083	0.039083	0.057694	0.063477	0.064077	0.034826	0.048059	0.048826	0.016279	0.032744	0.030871
9	0.024436	0.036786	0.033685	0.033685	0.052840	0.062167	0.059003	0.030340	0.017683	0.017043	0.014941	0.021855	0.019997
10	0.052927	0.029062	0.025809	0.025809	0.032885	0.045715	0.032079	0.026323	0.017940	0.016190	0.018033	0.028546	0.027428
11	0.046584	0.040771	0.045180	0.045180	0.027950	0.047838	0.031525	0.025805	0.044072	0.041381	0.009215	0.026198	0.024805
12	0.062494	0.037624	0.045799	0.045799	0.024205	0.037017	0.031373	0.018806	0.028590	0.027061	0.017221	0.087920	0.078722
13	0.051055	0.030082	0.041770	0.041770	0.025189	0.045712	0.027598	0.013446	0.030257	0.030204	0.002852	0.056383	0.050902
14	0.045336	0.026070	0.035821	0.035821	0.027435	0.042348	0.033477	0.024021	0.023951	0.025697	0.004971	0.048250	0.043087
15	0.031923	0.022208	0.038412	0.038412	0.026908	0.037037	0.032845	0.019936	0.018410	0.019228	0.018594	0.028953	0.024421
16	0.038578	0.018665	0.035159	0.035159	0.026714	0.024469	0.027413	0.055915	0.014718	0.015792	0.031004	0.022498	0.021618
17	0.028907	0.015398	0.035080	0.035080	0.032058	0.020412	0.025303	0.044760	0.013232	0.013489	0.041292	0.018760	0.016864
18	0.021628	0.012350	0.032402	0.032402	0.018731	0.014509	0.021163	0.037012	0.013138	0.013534	0.031647	0.025502	0.023545
19	0.017365	0.009965	0.024282	0.024282	0.017689	0.014544	0.022359	0.030639	0.010719	0.009828	0.048417	0.035354	0.032228
20	0.013622	0.007440	0.018456	0.018456	0.022068	0.014159	0.015781	0.032824	0.009528	0.009369	0.035754	0.027142	0.024374
21	0.010606	0.005373	0.012996	0.012996	0.019618	0.012516	0.017856	0.028859	0.003893	0.004506	0.033019	0.020163	0.018389
22	0.007175	0.003961	0.013048	0.013048	0.021770	0.011016	0.019305	0.030050	0.004563	0.004678	0.021400	0.013407	0.012671
23	0.004783	0.002340	0.008626	0.008626	0.024396	0.007096	0.016162	0.035423	0.002344	0.002323	0.039074	0.012108	0.012375
24	0.005407	0.001992	0.008068	0.008068	0.013900	0.004343	0.008313	0.028262	0.002225	0.002388	0.059603	0.012069	0.011774
25	0.004575	0.001331	0.006184	0.006184	0.010880	0.002220	0.007530	0.017378	0.001247	0.001414	0.026560	0.007491	0.008079
26	0.003327	0.001128	0.004317	0.004317	0.009369	0.000923	0.006234	0.011017	0.001003	0.001073	0.043513	0.005785	0.006273
27	0.001976	0.000841	0.003114	0.003114	0.006966	0.001173	0.005145	0.013629	0.000740	0.000713	0.022466	0.003739	0.003870
28	0.001144	0.000778	0.002355	0.002355	0.006734	0.000201	0.005435	0.014955	0.000677	0.000730	0.024344	0.002912	0.003640
29	0.001664	0.000733	0.002259	0.002259	0.004904	0.000344	0.002609	0.009023	0.000533	0.000653	0.025065	0.002335	0.003493
30	0.021004	0.006328	0.013144	0.013144	0.017635	0.000280	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Montgomery County 2026 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.060102	0.106494	0.079624	0.079624	0.053311	0.053311	0.053311	0.055878	0.107326	0.108951	0.055878	0.054796	0.068825
1	0.066549	0.098530	0.076806	0.076806	0.053213	0.053082	0.053192	0.055727	0.098838	0.103650	0.056089	0.056698	0.059543
2	0.058230	0.081980	0.056214	0.056214	0.053415	0.053131	0.053387	0.055943	0.113632	0.111268	0.056737	0.044354	0.047903
3	0.068317	0.080777	0.055472	0.055472	0.054397	0.054004	0.054308	0.056503	0.089706	0.085755	0.058147	0.053668	0.060675
4	0.053135	0.082808	0.056362	0.056362	0.054744	0.054257	0.054641	0.056502	0.101333	0.102451	0.058545	0.064806	0.071965
5	0.060726	0.072633	0.059676	0.059676	0.051675	0.051124	0.051612	0.054469	0.056427	0.056032	0.056986	0.056252	0.057263
6	0.056463	0.067981	0.049253	0.049253	0.051827	0.051090	0.051839	0.054374	0.053431	0.050813	0.057096	0.057525	0.058116
7	0.051159	0.054177	0.041543	0.041543	0.052672	0.051595	0.052695	0.054749	0.069221	0.071436	0.058059	0.063625	0.060032
8	0.028803	0.043392	0.039083	0.039083	0.048125	0.046622	0.047904	0.050848	0.048059	0.048826	0.055022	0.032744	0.030871
9	0.024436	0.036786	0.033685	0.033685	0.064014	0.070939	0.067696	0.026131	0.017683	0.017043	0.015178	0.021855	0.019997
10	0.052927	0.029062	0.025809	0.025809	0.059196	0.066851	0.059289	0.026395	0.017940	0.016190	0.015220	0.028546	0.027428
11	0.046584	0.040771	0.045180	0.045180	0.050025	0.053616	0.055111	0.030946	0.044072	0.041381	0.015055	0.026198	0.024805
12	0.062494	0.037624	0.045799	0.045799	0.045285	0.051800	0.050126	0.026719	0.028590	0.027061	0.013710	0.087920	0.078722
13	0.051055	0.030082	0.041770	0.041770	0.027519	0.037038	0.026572	0.022762	0.030257	0.030204	0.016287	0.056383	0.050902
14	0.045336	0.026070	0.035821	0.035821	0.023114	0.038227	0.025789	0.022114	0.023951	0.025697	0.008257	0.048250	0.043087
15	0.031923	0.022208	0.038412	0.038412	0.019768	0.029133	0.025323	0.015965	0.018410	0.019228	0.015311	0.028953	0.024421
16	0.038578	0.018665	0.035159	0.035159	0.020334	0.035504	0.022005	0.011312	0.014718	0.015792	0.002516	0.022498	0.021618
17	0.028907	0.015398	0.035080	0.035080	0.021884	0.032433	0.026359	0.020025	0.013232	0.013489	0.004349	0.018760	0.016864
18	0.021628	0.012350	0.032402	0.032402	0.020946	0.027559	0.025198	0.016314	0.013138	0.013534	0.016009	0.025502	0.023545
19	0.017365	0.009965	0.024282	0.024282	0.020545	0.017950	0.020764	0.045336	0.010719	0.009828	0.026480	0.035354	0.032228
20	0.013622	0.007440	0.018456	0.018456	0.024052	0.014542	0.018668	0.035616	0.009528	0.009369	0.034700	0.027142	0.024374
21	0.010606	0.005373	0.012996	0.012996	0.013883	0.010189	0.015413	0.029179	0.003893	0.004506	0.026380	0.020163	0.018389
22	0.007175	0.003961	0.013048	0.013048	0.012940	0.010052	0.016058	0.023923	0.004563	0.004678	0.040035	0.013407	0.012671
23	0.004783	0.002340	0.008626	0.008626	0.015951	0.009652	0.011191	0.025391	0.002344	0.002323	0.029321	0.012108	0.012375
24	0.005407	0.001992	0.008068	0.008068	0.014005	0.008408	0.012497	0.022116	0.002225	0.002388	0.026858	0.012069	0.011774
25	0.004575	0.001331	0.006184	0.006184	0.015337	0.007281	0.013322	0.022806	0.001247	0.001414	0.017266	0.007491	0.008079
26	0.003327	0.001128	0.004317	0.004317	0.016979	0.004626	0.011010	0.026631	0.001003	0.001073	0.031264	0.005785	0.006273
27	0.001976	0.000841	0.003114	0.003114	0.009554	0.002789	0.005589	0.021048	0.000740	0.000713	0.047300	0.003739	0.003870
28	0.001144	0.000778	0.002355	0.002355	0.007379	0.001402	0.004990	0.012815	0.000677	0.000730	0.020905	0.002912	0.003640
29	0.001664	0.000733	0.002259	0.002259	0.006276	0.000575	0.004078	0.008047	0.000533	0.000653	0.033963	0.002335	0.003493
30	0.021004	0.006328	0.013144	0.013144	0.017635	0.001218	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Montgomery County 2027 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.060102	0.106494	0.079624	0.079624	0.052770	0.052770	0.052770	0.055385	0.107326	0.108951	0.055385	0.054796	0.068825
1	0.066549	0.098530	0.076806	0.076806	0.052814	0.052631	0.052756	0.055139	0.098838	0.103650	0.056488	0.056698	0.059543
2	0.058230	0.081980	0.056214	0.056214	0.052718	0.052406	0.052638	0.054991	0.113632	0.111268	0.056702	0.044354	0.047903
3	0.068317	0.080777	0.055472	0.055472	0.052918	0.052454	0.052831	0.055204	0.089706	0.085755	0.057356	0.053668	0.060675
4	0.053135	0.082808	0.056362	0.056362	0.053891	0.053316	0.053743	0.055756	0.101333	0.102451	0.058781	0.064806	0.071965
5	0.060726	0.072633	0.059676	0.059676	0.053660	0.052939	0.053478	0.055275	0.056427	0.056032	0.058720	0.056252	0.057263
6	0.056463	0.067981	0.049253	0.049253	0.050110	0.049293	0.049951	0.052822	0.053431	0.050813	0.056704	0.057525	0.058116
7	0.051159	0.054177	0.041543	0.041543	0.050257	0.049260	0.050171	0.052730	0.069221	0.071436	0.056813	0.063625	0.060032
8	0.028803	0.043392	0.039083	0.039083	0.050525	0.049151	0.050427	0.052628	0.048059	0.048826	0.057311	0.032744	0.030871
9	0.024436	0.036786	0.033685	0.033685	0.046163	0.044413	0.045842	0.048878	0.017683	0.017043	0.054314	0.021855	0.019997
10	0.052927	0.029062	0.025809	0.025809	0.061404	0.067579	0.064781	0.025119	0.017940	0.016190	0.014982	0.028546	0.027428
11	0.046584	0.040771	0.045180	0.045180	0.056161	0.062912	0.056092	0.025148	0.044072	0.041381	0.014903	0.026198	0.024805
12	0.062494	0.037624	0.045799	0.045799	0.047461	0.050457	0.052138	0.029484	0.028590	0.027061	0.014741	0.087920	0.078722
13	0.051055	0.030082	0.041770	0.041770	0.042489	0.048150	0.046877	0.025230	0.030257	0.030204	0.013316	0.056383	0.050902
14	0.045336	0.026070	0.035821	0.035821	0.025820	0.034428	0.024850	0.021493	0.023951	0.025697	0.015819	0.048250	0.043087
15	0.031923	0.022208	0.038412	0.038412	0.021687	0.035534	0.024118	0.020881	0.018410	0.019228	0.008020	0.028953	0.024421
16	0.038578	0.018665	0.035159	0.035159	0.018340	0.026744	0.023407	0.014939	0.014718	0.015792	0.014749	0.022498	0.021618
17	0.028907	0.015398	0.035080	0.035080	0.018865	0.032592	0.020340	0.010585	0.013232	0.013489	0.002423	0.018760	0.016864
18	0.021628	0.012350	0.032402	0.032402	0.020074	0.029399	0.024077	0.018568	0.013138	0.013534	0.004155	0.025502	0.023545
19	0.017365	0.009965	0.024282	0.024282	0.019213	0.024981	0.023017	0.015126	0.010719	0.009828	0.015295	0.035354	0.032228
20	0.013622	0.007440	0.018456	0.018456	0.018630	0.016064	0.018740	0.041651	0.009528	0.009369	0.025089	0.027142	0.024374
21	0.010606	0.005373	0.012996	0.012996	0.021810	0.013014	0.016849	0.032722	0.003893	0.004506	0.032878	0.020163	0.018389
22	0.007175	0.003961	0.013048	0.013048	0.012589	0.009118	0.013911	0.026807	0.004563	0.004678	0.024995	0.013407	0.012671
23	0.004783	0.002340	0.008626	0.008626	0.011598	0.008880	0.014318	0.021775	0.002344	0.002323	0.037614	0.012108	0.012375
24	0.005407	0.001992	0.008068	0.008068	0.014297	0.008526	0.009979	0.023111	0.002225	0.002388	0.027548	0.012069	0.011774
25	0.004575	0.001331	0.006184	0.006184	0.012553	0.007427	0.011144	0.020130	0.001247	0.001414	0.025235	0.007491	0.008079
26	0.003327	0.001128	0.004317	0.004317	0.013586	0.006348	0.011734	0.020564	0.001003	0.001073	0.016085	0.005785	0.006273
27	0.001976	0.000841	0.003114	0.003114	0.015041	0.004033	0.009698	0.024014	0.000740	0.000713	0.029126	0.003739	0.003870
28	0.001144	0.000778	0.002355	0.002355	0.008463	0.002432	0.004923	0.018979	0.000677	0.000730	0.044065	0.002912	0.003640
29	0.001664	0.000733	0.002259	0.002259	0.006459	0.001206	0.004341	0.011447	0.000533	0.000653	0.019310	0.002335	0.003493
30	0.021004	0.006328	0.013144	0.013144	0.017635	0.001542	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Waller County 2011 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.044529	0.047336	0.037599	0.037599	0.036180	0.074697	0.043899	0.020412	0.107326	0.108951	0.017572	0.054796	0.068825
1	0.068702	0.065493	0.048997	0.048997	0.039841	0.101513	0.042214	0.015110	0.098838	0.103650	0.002979	0.056698	0.059543
2	0.072519	0.070307	0.041818	0.041818	0.046623	0.104812	0.055843	0.028331	0.113632	0.111268	0.005313	0.044354	0.047903
3	0.055980	0.068618	0.040856	0.040856	0.049281	0.102921	0.059585	0.025227	0.089706	0.085755	0.020619	0.053668	0.060675
4	0.055980	0.079301	0.045074	0.045074	0.052966	0.076456	0.054774	0.076490	0.101333	0.102451	0.035762	0.064806	0.071965
5	0.054707	0.068702	0.048257	0.048257	0.068397	0.072053	0.055227	0.064970	0.056427	0.056032	0.048854	0.056252	0.057263
6	0.043257	0.068618	0.045222	0.045222	0.042648	0.057371	0.050452	0.056933	0.053431	0.050813	0.038874	0.057525	0.058116
7	0.041985	0.054894	0.037821	0.037821	0.042736	0.064267	0.058689	0.049088	0.069221	0.071436	0.060535	0.063625	0.060032
8	0.025445	0.044633	0.035379	0.035379	0.057372	0.070033	0.045203	0.055546	0.048059	0.048826	0.046135	0.032744	0.030871
9	0.035623	0.036652	0.032122	0.032122	0.054751	0.068493	0.055453	0.052116	0.017683	0.017043	0.044240	0.021855	0.019997
10	0.048346	0.031205	0.025831	0.025831	0.065557	0.068653	0.065744	0.057687	0.017940	0.016190	0.029414	0.028546	0.027428
11	0.044529	0.049278	0.048849	0.048849	0.078557	0.049889	0.060342	0.072218	0.044072	0.041381	0.055786	0.026198	0.024805
12	0.059796	0.045900	0.050699	0.050699	0.047578	0.034391	0.034339	0.060105	0.028590	0.027061	0.086656	0.087920	0.078722
13	0.055980	0.041973	0.046703	0.046703	0.039627	0.019471	0.033557	0.038712	0.030257	0.030204	0.039532	0.056383	0.050902
14	0.048346	0.038975	0.043446	0.043446	0.036599	0.009178	0.030650	0.026002	0.023951	0.025697	0.066825	0.048250	0.043087
15	0.039440	0.035005	0.047147	0.047147	0.029292	0.013218	0.027866	0.034289	0.018410	0.019228	0.035417	0.028953	0.024421
16	0.031807	0.031416	0.044704	0.044704	0.030064	0.002472	0.031547	0.039908	0.014718	0.015792	0.039586	0.022498	0.021618
17	0.034351	0.026940	0.049737	0.049737	0.023718	0.004862	0.016693	0.025686	0.013232	0.013489	0.041853	0.018760	0.016864
18	0.022901	0.022380	0.047073	0.047073	0.021178	0.000730	0.020301	0.020470	0.013138	0.013534	0.025183	0.025502	0.023545
19	0.024173	0.019382	0.033306	0.033306	0.013178	0.001112	0.018896	0.016540	0.010719	0.009828	0.024551	0.035354	0.032228
20	0.019084	0.012752	0.029383	0.029383	0.011799	0.000936	0.024538	0.021137	0.009528	0.009369	0.016394	0.027142	0.024374
21	0.007634	0.008867	0.018429	0.018429	0.017000	0.001181	0.026242	0.024395	0.003893	0.004506	0.025289	0.020163	0.018389
22	0.006361	0.007221	0.022722	0.022722	0.021289	0.000616	0.013673	0.017998	0.004563	0.004678	0.031470	0.013407	0.012671
23	0.012723	0.004645	0.014655	0.014655	0.013982	0.000249	0.014528	0.019271	0.002344	0.002323	0.028159	0.012108	0.012375
24	0.008906	0.003420	0.013989	0.013989	0.009457	0.000070	0.013551	0.017751	0.002225	0.002388	0.025783	0.012069	0.011774
25	0.007634	0.002407	0.011102	0.011102	0.007992	0.000024	0.010508	0.012854	0.001247	0.001414	0.015597	0.007491	0.008079
26	0.001272	0.002449	0.006883	0.006883	0.008237	0.000050	0.007903	0.012188	0.001003	0.001073	0.016256	0.005785	0.006273
27	0.001272	0.001267	0.006809	0.006809	0.006363	0.000037	0.006810	0.010137	0.000740	0.000713	0.015723	0.003739	0.003870
28	0.002545	0.001267	0.003923	0.003923	0.005349	0.000027	0.005974	0.008018	0.000677	0.000730	0.014339	0.002912	0.003640
29	0.002545	0.000845	0.003479	0.003479	0.004757	0.000020	0.004936	0.006995	0.000533	0.000653	0.014229	0.002335	0.003493
30	0.021628	0.007854	0.017985	0.017985	0.017635	0.000198	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Waller County 2017 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.044529	0.047336	0.037599	0.037599	0.078824	0.091142	0.083978	0.031614	0.107326	0.108951	0.016664	0.054796	0.068825
1	0.068702	0.065493	0.048997	0.048997	0.075667	0.090093	0.076580	0.032820	0.098838	0.103650	0.017093	0.056698	0.059543
2	0.072519	0.070307	0.041818	0.041818	0.067199	0.077034	0.075099	0.039904	0.113632	0.111268	0.017428	0.044354	0.047903
3	0.055980	0.068618	0.040856	0.040856	0.063959	0.079629	0.072132	0.035734	0.089706	0.085755	0.016351	0.053668	0.060675
4	0.055980	0.079301	0.045074	0.045074	0.041394	0.062045	0.040955	0.031878	0.101333	0.102451	0.020170	0.064806	0.071965
5	0.054707	0.068702	0.048257	0.048257	0.036596	0.068674	0.042028	0.032138	0.056427	0.056032	0.010539	0.056252	0.057263
6	0.043257	0.068618	0.045222	0.045222	0.032532	0.055132	0.043047	0.023869	0.053431	0.050813	0.019997	0.057525	0.058116
7	0.041985	0.054894	0.037821	0.037821	0.035230	0.072004	0.039560	0.017559	0.069221	0.071436	0.003389	0.063625	0.060032
8	0.025445	0.044633	0.035379	0.035379	0.039392	0.069145	0.049382	0.031958	0.048059	0.048826	0.005994	0.032744	0.030871
9	0.035623	0.036652	0.032122	0.032122	0.039680	0.062851	0.049899	0.027028	0.017683	0.017043	0.022758	0.021855	0.019997
10	0.048346	0.031205	0.025831	0.025831	0.041020	0.044016	0.043545	0.078002	0.017940	0.016190	0.038819	0.028546	0.027428
11	0.044529	0.049278	0.048849	0.048849	0.050566	0.038149	0.041402	0.063658	0.044072	0.041381	0.052497	0.026198	0.024805
12	0.059796	0.045900	0.050699	0.050699	0.030779	0.028742	0.036224	0.054189	0.028590	0.027061	0.041177	0.087920	0.078722
13	0.055980	0.041973	0.046703	0.046703	0.029860	0.029906	0.039417	0.045716	0.030257	0.030204	0.063961	0.056383	0.050902
14	0.048346	0.038975	0.043446	0.043446	0.038819	0.030838	0.029111	0.050432	0.023951	0.025697	0.048354	0.048250	0.043087
15	0.039440	0.035005	0.047147	0.047147	0.035967	0.028980	0.034482	0.045640	0.018410	0.019228	0.045680	0.028953	0.024421
16	0.031807	0.031416	0.044704	0.044704	0.041037	0.026572	0.038448	0.048454	0.014718	0.015792	0.030061	0.022498	0.021618
17	0.034351	0.026940	0.049737	0.049737	0.047968	0.018212	0.033726	0.058821	0.013232	0.013489	0.056177	0.018760	0.016864
18	0.022901	0.022380	0.047073	0.047073	0.028106	0.011607	0.017894	0.047873	0.013138	0.013534	0.087043	0.025502	0.023545
19	0.024173	0.019382	0.033306	0.033306	0.022635	0.006198	0.016732	0.030019	0.010719	0.009828	0.039384	0.035354	0.032228
20	0.019084	0.012752	0.029383	0.029383	0.020051	0.002680	0.014288	0.019410	0.009528	0.009369	0.065558	0.027142	0.024374
21	0.007634	0.008867	0.018429	0.018429	0.015338	0.003551	0.012169	0.024501	0.003893	0.004506	0.034386	0.020163	0.018389
22	0.006361	0.007221	0.022722	0.022722	0.015262	0.000636	0.013276	0.027421	0.004563	0.004678	0.037837	0.013407	0.012671
23	0.012723	0.004645	0.014655	0.014655	0.011438	0.001134	0.006577	0.016877	0.002344	0.002323	0.039588	0.012108	0.012375
24	0.008906	0.003420	0.013989	0.013989	0.009950	0.000160	0.007616	0.013002	0.002225	0.002388	0.023454	0.012069	0.011774
25	0.007634	0.002407	0.011102	0.011102	0.006052	0.000234	0.006794	0.010264	0.001247	0.001414	0.022808	0.007491	0.008079
26	0.001272	0.002449	0.006883	0.006883	0.005200	0.000182	0.008420	0.012742	0.001003	0.001073	0.015103	0.005785	0.006273
27	0.001272	0.001267	0.006809	0.006809	0.007295	0.000215	0.008562	0.014199	0.000740	0.000713	0.022934	0.003739	0.003870
28	0.002545	0.001267	0.003923	0.003923	0.008928	0.000108	0.004271	0.010231	0.000677	0.000730	0.028466	0.002912	0.003640
29	0.002545	0.000845	0.003479	0.003479	0.005620	0.000040	0.004325	0.010633	0.000533	0.000653	0.025257	0.002335	0.003493
30	0.021628	0.007854	0.017985	0.017985	0.017635	0.000091	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Waller County 2018 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.044529	0.047336	0.037599	0.037599	0.056764	0.056764	0.056764	0.059441	0.107326	0.108951	0.059441	0.054796	0.068825
1	0.068702	0.065493	0.048997	0.048997	0.078327	0.090363	0.083431	0.031402	0.098838	0.103650	0.016783	0.056698	0.059543
2	0.072519	0.070307	0.041818	0.041818	0.075191	0.089323	0.076081	0.032600	0.113632	0.111268	0.017214	0.044354	0.047903
3	0.055980	0.068618	0.040856	0.040856	0.066776	0.076375	0.074609	0.039636	0.089706	0.085755	0.017551	0.053668	0.060675
4	0.055980	0.079301	0.045074	0.045074	0.063556	0.078948	0.071662	0.035495	0.101333	0.102451	0.016467	0.064806	0.071965
5	0.054707	0.068702	0.048257	0.048257	0.040595	0.060250	0.040093	0.031371	0.056427	0.056032	0.020168	0.056252	0.057263
6	0.043257	0.068618	0.045222	0.045222	0.035413	0.065287	0.040533	0.031332	0.053431	0.050813	0.010463	0.057525	0.058116
7	0.041985	0.054894	0.037821	0.037821	0.031480	0.052413	0.041516	0.023270	0.069221	0.071436	0.019852	0.063625	0.060032
8	0.025445	0.044633	0.035379	0.035379	0.033634	0.066986	0.037578	0.016956	0.048059	0.048826	0.003340	0.032744	0.030871
9	0.035623	0.036652	0.032122	0.032122	0.037606	0.064326	0.046908	0.030862	0.017683	0.017043	0.005908	0.021855	0.019997
10	0.048346	0.031205	0.025831	0.025831	0.037881	0.058471	0.047399	0.026101	0.017940	0.016190	0.022431	0.028546	0.027428
11	0.044529	0.049278	0.048849	0.048849	0.038627	0.040052	0.040731	0.074609	0.044072	0.041381	0.037983	0.026198	0.024805
12	0.059796	0.045900	0.050699	0.050699	0.047616	0.034712	0.038727	0.060889	0.028590	0.027061	0.051366	0.087920	0.078722
13	0.055980	0.041973	0.046703	0.046703	0.028583	0.025567	0.033357	0.051333	0.030257	0.030204	0.039996	0.056383	0.050902
14	0.048346	0.038975	0.043446	0.043446	0.027729	0.026602	0.036297	0.043307	0.023951	0.025697	0.062126	0.048250	0.043087
15	0.039440	0.035005	0.047147	0.047147	0.036049	0.027432	0.026806	0.047774	0.018410	0.019228	0.046967	0.028953	0.024421
16	0.031807	0.031416	0.044704	0.044704	0.032933	0.025188	0.031252	0.042815	0.014718	0.015792	0.044042	0.022498	0.021618
17	0.034351	0.026940	0.049737	0.049737	0.037575	0.023095	0.034847	0.045455	0.013232	0.013489	0.028983	0.018760	0.016864
18	0.022901	0.022380	0.047073	0.047073	0.043298	0.015458	0.030076	0.054639	0.013138	0.013534	0.053761	0.025502	0.023545
19	0.024173	0.019382	0.033306	0.033306	0.025369	0.009852	0.015958	0.044470	0.010719	0.009828	0.083300	0.035354	0.032228
20	0.019084	0.012752	0.029383	0.029383	0.020137	0.005134	0.014678	0.027609	0.009528	0.009369	0.037408	0.027142	0.024374
21	0.007634	0.008867	0.018429	0.018429	0.017838	0.002220	0.012535	0.017851	0.003893	0.004506	0.062269	0.020163	0.018389
22	0.006361	0.007221	0.022722	0.022722	0.013645	0.002941	0.010676	0.022533	0.004563	0.004678	0.032661	0.013407	0.012671
23	0.012723	0.004645	0.014655	0.014655	0.013379	0.000514	0.011454	0.024967	0.002344	0.002323	0.035668	0.012108	0.012375
24	0.008906	0.003420	0.013989	0.013989	0.010027	0.000916	0.005674	0.015367	0.002225	0.002388	0.037319	0.012069	0.011774
25	0.007634	0.002407	0.011102	0.011102	0.008723	0.000129	0.006571	0.011838	0.001247	0.001414	0.022110	0.007491	0.008079
26	0.001272	0.002449	0.006883	0.006883	0.005227	0.000184	0.005762	0.009251	0.001003	0.001073	0.021337	0.005785	0.006273
27	0.001272	0.001267	0.006809	0.006809	0.004490	0.000144	0.007142	0.011484	0.000740	0.000713	0.014129	0.003739	0.003870
28	0.002545	0.001267	0.003923	0.003923	0.006300	0.000169	0.007262	0.012798	0.000677	0.000730	0.021455	0.002912	0.003640
29	0.002545	0.000845	0.003479	0.003479	0.007594	0.000083	0.003561	0.009127	0.000533	0.000653	0.026427	0.002335	0.003493
30	0.021628	0.007854	0.017985	0.017985	0.017635	0.000101	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Waller County 2020 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.044529	0.047336	0.037599	0.037599	0.056623	0.056623	0.056623	0.059505	0.107326	0.108951	0.059505	0.054796	0.068825
1	0.068702	0.065493	0.048997	0.048997	0.058906	0.058781	0.059000	0.060992	0.098838	0.103650	0.061446	0.056698	0.059543
2	0.072519	0.070307	0.041818	0.041818	0.055787	0.055441	0.055725	0.058218	0.113632	0.111268	0.059616	0.044354	0.047903
3	0.055980	0.068618	0.040856	0.040856	0.076979	0.088257	0.081903	0.030756	0.089706	0.085755	0.016832	0.053668	0.060675
4	0.055980	0.079301	0.045074	0.045074	0.073896	0.087241	0.074688	0.031930	0.101333	0.102451	0.017265	0.064806	0.071965
5	0.054707	0.068702	0.048257	0.048257	0.064800	0.073271	0.072235	0.038481	0.056427	0.056032	0.017480	0.056252	0.057263
6	0.043257	0.068618	0.045222	0.045222	0.060109	0.072950	0.067439	0.033841	0.053431	0.050813	0.016168	0.057525	0.058116
7	0.041985	0.054894	0.037821	0.037821	0.037895	0.054587	0.037185	0.029629	0.069221	0.071436	0.019658	0.063625	0.060032
8	0.025445	0.044633	0.035379	0.035379	0.032631	0.058063	0.037061	0.029329	0.048059	0.048826	0.010126	0.032744	0.030871
9	0.035623	0.036652	0.032122	0.032122	0.028626	0.045687	0.037403	0.021577	0.017683	0.017043	0.019072	0.021855	0.019997
10	0.048346	0.031205	0.025831	0.025831	0.030584	0.058389	0.033855	0.015723	0.017940	0.016190	0.003209	0.028546	0.027428
11	0.044529	0.049278	0.048849	0.048849	0.033749	0.055020	0.041655	0.028360	0.044072	0.041381	0.005636	0.026198	0.024805
12	0.059796	0.045900	0.050699	0.050699	0.033542	0.048997	0.041464	0.023756	0.028590	0.027061	0.021238	0.087920	0.078722
13	0.055980	0.041973	0.046703	0.046703	0.033749	0.032921	0.035112	0.067292	0.030257	0.030204	0.035704	0.056383	0.050902
14	0.048346	0.038975	0.043446	0.043446	0.041041	0.027942	0.032880	0.054391	0.023951	0.025697	0.047926	0.048250	0.043087
15	0.039440	0.035005	0.047147	0.047147	0.024637	0.020580	0.028321	0.045855	0.018410	0.019228	0.037318	0.028953	0.024421
16	0.031807	0.031416	0.044704	0.044704	0.023580	0.020997	0.030362	0.038331	0.014718	0.015792	0.057546	0.022498	0.021618
17	0.034351	0.026940	0.049737	0.049737	0.030235	0.021194	0.022079	0.041875	0.013232	0.013489	0.043179	0.018760	0.016864
18	0.022901	0.022380	0.047073	0.047073	0.027245	0.019074	0.025355	0.037181	0.013138	0.013534	0.040195	0.025502	0.023545
19	0.024173	0.019382	0.033306	0.033306	0.030654	0.017111	0.027831	0.039087	0.010719	0.009828	0.026252	0.035354	0.032228
20	0.019084	0.012752	0.029383	0.029383	0.034835	0.011221	0.023655	0.046548	0.009528	0.009369	0.048337	0.027142	0.024374
21	0.007634	0.008867	0.018429	0.018429	0.020123	0.006993	0.012353	0.037509	0.003893	0.004506	0.074328	0.020163	0.018389
22	0.006361	0.007221	0.022722	0.022722	0.015973	0.003645	0.011362	0.023287	0.004563	0.004678	0.033379	0.013407	0.012671
23	0.012723	0.004645	0.014655	0.014655	0.013951	0.001543	0.009553	0.014916	0.002344	0.002323	0.055151	0.012108	0.012375
24	0.008906	0.003420	0.013989	0.013989	0.010520	0.001999	0.008005	0.018640	0.002225	0.002388	0.028706	0.012069	0.011774
25	0.007634	0.002407	0.011102	0.011102	0.010315	0.000349	0.008588	0.020653	0.001247	0.001414	0.031349	0.007491	0.008079
26	0.001272	0.002449	0.006883	0.006883	0.007620	0.000609	0.004188	0.012591	0.001003	0.001073	0.032556	0.005785	0.006273
27	0.001272	0.001267	0.006809	0.006809	0.006533	0.000084	0.004770	0.009602	0.000740	0.000713	0.019139	0.003739	0.003870
28	0.002545	0.001267	0.003923	0.003923	0.003915	0.000120	0.004184	0.007503	0.000677	0.000730	0.018470	0.002912	0.003640
29	0.002545	0.000845	0.003479	0.003479	0.003315	0.000091	0.005102	0.009226	0.000533	0.000653	0.012139	0.002335	0.003493
30	0.021628	0.007854	0.017985	0.017985	0.017635	0.000219	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Waller County 2023 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.044529	0.047336	0.037599	0.037599	0.055916	0.055916	0.055916	0.058180	0.107326	0.108951	0.058180	0.054796	0.068825
1	0.068702	0.065493	0.048997	0.048997	0.056272	0.056177	0.056259	0.058179	0.098838	0.103650	0.058578	0.056698	0.059543
2	0.072519	0.070307	0.041818	0.041818	0.053703	0.053595	0.053754	0.056574	0.113632	0.111268	0.057461	0.044354	0.047903
3	0.055980	0.068618	0.040856	0.040856	0.055079	0.054952	0.055275	0.057472	0.089706	0.085755	0.058467	0.053668	0.060675
4	0.055980	0.079301	0.045074	0.045074	0.057299	0.057046	0.057596	0.058908	0.101333	0.102451	0.060375	0.064806	0.071965
5	0.054707	0.068702	0.048257	0.048257	0.053587	0.052974	0.053667	0.055701	0.056427	0.056032	0.058115	0.056252	0.057263
6	0.043257	0.068618	0.045222	0.045222	0.072106	0.081694	0.076767	0.028881	0.053431	0.050813	0.016156	0.057525	0.058116
7	0.041985	0.054894	0.037821	0.037821	0.067500	0.078131	0.068119	0.029440	0.069221	0.071436	0.016327	0.063625	0.060032
8	0.025445	0.044633	0.035379	0.035379	0.057694	0.063477	0.064077	0.034826	0.048059	0.048826	0.016279	0.032744	0.030871
9	0.035623	0.036652	0.032122	0.032122	0.052840	0.062167	0.059003	0.030340	0.017683	0.017043	0.014941	0.021855	0.019997
10	0.048346	0.031205	0.025831	0.025831	0.032885	0.045715	0.032079	0.026323	0.017940	0.016190	0.018033	0.028546	0.027428
11	0.044529	0.049278	0.048849	0.048849	0.027950	0.047838	0.031525	0.025805	0.044072	0.041381	0.009215	0.026198	0.024805
12	0.059796	0.045900	0.050699	0.050699	0.024205	0.037017	0.031373	0.018806	0.028590	0.027061	0.017221	0.087920	0.078722
13	0.055980	0.041973	0.046703	0.046703	0.025189	0.045712	0.027598	0.013446	0.030257	0.030204	0.002852	0.056383	0.050902
14	0.048346	0.038975	0.043446	0.043446	0.027435	0.042348	0.033477	0.024021	0.023951	0.025697	0.004971	0.048250	0.043087
15	0.039440	0.035005	0.047147	0.047147	0.026908	0.037037	0.032845	0.019936	0.018410	0.019228	0.018594	0.028953	0.024421
16	0.031807	0.031416	0.044704	0.044704	0.026714	0.024469	0.027413	0.055915	0.014718	0.015792	0.031004	0.022498	0.021618
17	0.034351	0.026940	0.049737	0.049737	0.032058	0.020412	0.025303	0.044760	0.013232	0.013489	0.041292	0.018760	0.016864
18	0.022901	0.022380	0.047073	0.047073	0.018731	0.014509	0.021163	0.037012	0.013138	0.013534	0.031647	0.025502	0.023545
19	0.024173	0.019382	0.033306	0.033306	0.017689	0.014544	0.022359	0.030639	0.010719	0.009828	0.048417	0.035354	0.032228
20	0.019084	0.012752	0.029383	0.029383	0.022068	0.014159	0.015781	0.032824	0.009528	0.009369	0.035754	0.027142	0.024374
21	0.007634	0.008867	0.018429	0.018429	0.019618	0.012516	0.017856	0.028859	0.003893	0.004506	0.033019	0.020163	0.018389
22	0.006361	0.007221	0.022722	0.022722	0.021770	0.011016	0.019305	0.030050	0.004563	0.004678	0.021400	0.013407	0.012671
23	0.012723	0.004645	0.014655	0.014655	0.024396	0.007096	0.016162	0.035423	0.002344	0.002323	0.039074	0.012108	0.012375
24	0.008906	0.003420	0.013989	0.013989	0.013900	0.004343	0.008313	0.028262	0.002225	0.002388	0.059603	0.012069	0.011774
25	0.007634	0.002407	0.011102	0.011102	0.010880	0.002220	0.007530	0.017378	0.001247	0.001414	0.026560	0.007491	0.008079
26	0.001272	0.002449	0.006883	0.006883	0.009369	0.000923	0.006234	0.011017	0.001003	0.001073	0.043513	0.005785	0.006273
27	0.001272	0.001267	0.006809	0.006809	0.006966	0.001173	0.005145	0.013629	0.000740	0.000713	0.022466	0.003739	0.003870
28	0.002545	0.001267	0.003923	0.003923	0.006734	0.000201	0.005435	0.014955	0.000677	0.000730	0.024344	0.002912	0.003640
29	0.002545	0.000845	0.003479	0.003479	0.004904	0.000344	0.002609	0.009023	0.000533	0.000653	0.025065	0.002335	0.003493
30	0.021628	0.007854	0.017985	0.017985	0.017635	0.000280	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Waller County 2026 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.044529	0.047336	0.037599	0.037599	0.053311	0.053311	0.053311	0.055878	0.107326	0.108951	0.055878	0.054796	0.068825
1	0.068702	0.065493	0.048997	0.048997	0.053213	0.053082	0.053192	0.055727	0.098838	0.103650	0.056089	0.056698	0.059543
2	0.072519	0.070307	0.041818	0.041818	0.053415	0.053131	0.053387	0.055943	0.113632	0.111268	0.056737	0.044354	0.047903
3	0.055980	0.068618	0.040856	0.040856	0.054397	0.054004	0.054308	0.056503	0.089706	0.085755	0.058147	0.053668	0.060675
4	0.055980	0.079301	0.045074	0.045074	0.054744	0.054257	0.054641	0.056502	0.101333	0.102451	0.058545	0.064806	0.071965
5	0.054707	0.068702	0.048257	0.048257	0.051675	0.051124	0.051612	0.054469	0.056427	0.056032	0.056986	0.056252	0.057263
6	0.043257	0.068618	0.045222	0.045222	0.051827	0.051090	0.051839	0.054374	0.053431	0.050813	0.057096	0.057525	0.058116
7	0.041985	0.054894	0.037821	0.037821	0.052672	0.051595	0.052695	0.054749	0.069221	0.071436	0.058059	0.063625	0.060032
8	0.025445	0.044633	0.035379	0.035379	0.048125	0.046622	0.047904	0.050848	0.048059	0.048826	0.055022	0.032744	0.030871
9	0.035623	0.036652	0.032122	0.032122	0.064014	0.070939	0.067696	0.026131	0.017683	0.017043	0.015178	0.021855	0.019997
10	0.048346	0.031205	0.025831	0.025831	0.059196	0.066851	0.059289	0.026395	0.017940	0.016190	0.015220	0.028546	0.027428
11	0.044529	0.049278	0.048849	0.048849	0.050025	0.053616	0.055111	0.030946	0.044072	0.041381	0.015055	0.026198	0.024805
12	0.059796	0.045900	0.050699	0.050699	0.045285	0.051800	0.050126	0.026719	0.028590	0.027061	0.013710	0.087920	0.078722
13	0.055980	0.041973	0.046703	0.046703	0.027519	0.037038	0.026572	0.022762	0.030257	0.030204	0.016287	0.056383	0.050902
14	0.048346	0.038975	0.043446	0.043446	0.023114	0.038227	0.025789	0.022114	0.023951	0.025697	0.008257	0.048250	0.043087
15	0.039440	0.035005	0.047147	0.047147	0.019768	0.029133	0.025323	0.015965	0.018410	0.019228	0.015311	0.028953	0.024421
16	0.031807	0.031416	0.044704	0.044704	0.020334	0.035504	0.022005	0.011312	0.014718	0.015792	0.002516	0.022498	0.021618
17	0.034351	0.026940	0.049737	0.049737	0.021884	0.032433	0.026359	0.020025	0.013232	0.013489	0.004349	0.018760	0.016864
18	0.022901	0.022380	0.047073	0.047073	0.020946	0.027559	0.025198	0.016314	0.013138	0.013534	0.016009	0.025502	0.023545
19	0.024173	0.019382	0.033306	0.033306	0.020545	0.017950	0.020764	0.045336	0.010719	0.009828	0.026480	0.035354	0.032228
20	0.019084	0.012752	0.029383	0.029383	0.024052	0.014542	0.018668	0.035616	0.009528	0.009369	0.034700	0.027142	0.024374
21	0.007634	0.008867	0.018429	0.018429	0.013883	0.010189	0.015413	0.029179	0.003893	0.004506	0.026380	0.020163	0.018389
22	0.006361	0.007221	0.022722	0.022722	0.012940	0.010052	0.016058	0.023923	0.004563	0.004678	0.040035	0.013407	0.012671
23	0.012723	0.004645	0.014655	0.014655	0.015951	0.009652	0.011191	0.025391	0.002344	0.002323	0.029321	0.012108	0.012375
24	0.008906	0.003420	0.013989	0.013989	0.014005	0.008408	0.012497	0.022116	0.002225	0.002388	0.026858	0.012069	0.011774
25	0.007634	0.002407	0.011102	0.011102	0.015337	0.007281	0.013322	0.022806	0.001247	0.001414	0.017266	0.007491	0.008079
26	0.001272	0.002449	0.006883	0.006883	0.016979	0.004626	0.011010	0.026631	0.001003	0.001073	0.031264	0.005785	0.006273
27	0.001272	0.001267	0.006809	0.006809	0.009554	0.002789	0.005589	0.021048	0.000740	0.000713	0.047300	0.003739	0.003870
28	0.002545	0.001267	0.003923	0.003923	0.007379	0.001402	0.004990	0.012815	0.000677	0.000730	0.020905	0.002912	0.003640
29	0.002545	0.000845	0.003479	0.003479	0.006276	0.000575	0.004078	0.008047	0.000533	0.000653	0.033963	0.002335	0.003493
30	0.021628	0.007854	0.017985	0.017985	0.017635	0.001218	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Waller County 2027 Age Distribution Inputs to MOVES

Age	MC	PC	PT	LCT	OBus	Tbus	Sbus	RT	SUShT	SULhT	MH	CShT	CLhT
0	0.044529	0.047336	0.037599	0.037599	0.052770	0.052770	0.052770	0.055385	0.107326	0.108951	0.055385	0.054796	0.068825
1	0.068702	0.065493	0.048997	0.048997	0.052814	0.052631	0.052756	0.055139	0.098838	0.103650	0.056488	0.056698	0.059543
2	0.072519	0.070307	0.041818	0.041818	0.052718	0.052406	0.052638	0.054991	0.113632	0.111268	0.056702	0.044354	0.047903
3	0.055980	0.068618	0.040856	0.040856	0.052918	0.052454	0.052831	0.055204	0.089706	0.085755	0.057356	0.053668	0.060675
4	0.055980	0.079301	0.045074	0.045074	0.053891	0.053316	0.053743	0.055756	0.101333	0.102451	0.058781	0.064806	0.071965
5	0.054707	0.068702	0.048257	0.048257	0.053660	0.052939	0.053478	0.055275	0.056427	0.056032	0.058720	0.056252	0.057263
6	0.043257	0.068618	0.045222	0.045222	0.050110	0.049293	0.049951	0.052822	0.053431	0.050813	0.056704	0.057525	0.058116
7	0.041985	0.054894	0.037821	0.037821	0.050257	0.049260	0.050171	0.052730	0.069221	0.071436	0.056813	0.063625	0.060032
8	0.025445	0.044633	0.035379	0.035379	0.050525	0.049151	0.050427	0.052628	0.048059	0.048826	0.057311	0.032744	0.030871
9	0.035623	0.036652	0.032122	0.032122	0.046163	0.044413	0.045842	0.048878	0.017683	0.017043	0.054314	0.021855	0.019997
10	0.048346	0.031205	0.025831	0.025831	0.061404	0.067579	0.064781	0.025119	0.017940	0.016190	0.014982	0.028546	0.027428
11	0.044529	0.049278	0.048849	0.048849	0.056161	0.062912	0.056092	0.025148	0.044072	0.041381	0.014903	0.026198	0.024805
12	0.059796	0.045900	0.050699	0.050699	0.047461	0.050457	0.052138	0.029484	0.028590	0.027061	0.014741	0.087920	0.078722
13	0.055980	0.041973	0.046703	0.046703	0.042489	0.048150	0.046877	0.025230	0.030257	0.030204	0.013316	0.056383	0.050902
14	0.048346	0.038975	0.043446	0.043446	0.025820	0.034428	0.024850	0.021493	0.023951	0.025697	0.015819	0.048250	0.043087
15	0.039440	0.035005	0.047147	0.047147	0.021687	0.035534	0.024118	0.020881	0.018410	0.019228	0.008020	0.028953	0.024421
16	0.031807	0.031416	0.044704	0.044704	0.018340	0.026744	0.023407	0.014939	0.014718	0.015792	0.014749	0.022498	0.021618
17	0.034351	0.026940	0.049737	0.049737	0.018865	0.032592	0.020340	0.010585	0.013232	0.013489	0.002423	0.018760	0.016864
18	0.022901	0.022380	0.047073	0.047073	0.020074	0.029399	0.024077	0.018568	0.013138	0.013534	0.004155	0.025502	0.023545
19	0.024173	0.019382	0.033306	0.033306	0.019213	0.024981	0.023017	0.015126	0.010719	0.009828	0.015295	0.035354	0.032228
20	0.019084	0.012752	0.029383	0.029383	0.018630	0.016064	0.018740	0.041651	0.009528	0.009369	0.025089	0.027142	0.024374
21	0.007634	0.008867	0.018429	0.018429	0.021810	0.013014	0.016849	0.032722	0.003893	0.004506	0.032878	0.020163	0.018389
22	0.006361	0.007221	0.022722	0.022722	0.012589	0.009118	0.013911	0.026807	0.004563	0.004678	0.024995	0.013407	0.012671
23	0.012723	0.004645	0.014655	0.014655	0.011598	0.008880	0.014318	0.021775	0.002344	0.002323	0.037614	0.012108	0.012375
24	0.008906	0.003420	0.013989	0.013989	0.014297	0.008526	0.009979	0.023111	0.002225	0.002388	0.027548	0.012069	0.011774
25	0.007634	0.002407	0.011102	0.011102	0.012553	0.007427	0.011144	0.020130	0.001247	0.001414	0.025235	0.007491	0.008079
26	0.001272	0.002449	0.006883	0.006883	0.013586	0.006348	0.011734	0.020564	0.001003	0.001073	0.016085	0.005785	0.006273
27	0.001272	0.001267	0.006809	0.006809	0.015041	0.004033	0.009698	0.024014	0.000740	0.000713	0.029126	0.003739	0.003870
28	0.002545	0.001267	0.003923	0.003923	0.008463	0.002432	0.004923	0.018979	0.000677	0.000730	0.044065	0.002912	0.003640
29	0.002545	0.000845	0.003479	0.003479	0.006459	0.001206	0.004341	0.011447	0.000533	0.000653	0.019310	0.002335	0.003493
30	0.021628	0.007854	0.017985	0.017985	0.017635	0.001542	0.010061	0.013416	0.002564	0.003525	0.031075	0.008160	0.016255

Texas Statewide 2011 Fuel Engine Fractions Summary by Model Year.

SUT	Fuel Type	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996
MC	Gas	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
PC	Gas	0.90306	0.93570	0.94665	0.94784	0.96924	0.95752	0.98121	0.98710	0.98163	0.98742	0.98724	0.98443	0.98118	0.98877	0.99909	0.99876
PC	Diesel	0.01177	0.01061	0.00779	0.00069	0.00047	0.00695	0.00491	0.00338	0.00416	0.00464	0.00335	0.00309	0.00188	0.00221	0.00091	0.00124
PT	Gas	0.75726	0.79406	0.84100	0.88674	0.85626	0.91131	0.91051	0.89189	0.85736	0.87238	0.92153	0.90560	0.90991	0.97211	0.95551	0.95753
PT	Diesel	0.02341	0.01328	0.01718	0.03004	0.02790	0.04402	0.03595	0.04059	0.03865	0.03470	0.04103	0.02973	0.03925	0.01280	0.04449	0.04247
LCT	Gas	0.62303	0.63823	0.76558	0.81321	0.81565	0.85179	0.86984	0.85968	0.84007	0.84304	0.88196	0.87280	0.86328	0.94144	0.89876	0.90704
LCT	Diesel	0.06012	0.03476	0.04654	0.08017	0.06792	0.09978	0.08519	0.09267	0.08413	0.08484	0.08819	0.07731	0.09860	0.04495	0.10124	0.09296
OBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
TBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
SBus	Gas	0.03143	0.03886	0.02749	0.01298	0.00778	0.01011	0.00660	0.00377	0.00554	0.02596	0.01166	0.02569	0.01000	0.01000	0.01000	0.04154
SBus	Diesel	0.96857	0.96114	0.97251	0.98702	0.99222	0.98989	0.99340	0.99623	0.99446	0.97404	0.98834	0.97431	0.99000	0.99000	0.99000	0.95846
RT	Gas	0.00000	0.00000	0.00460	0.00204	0.00234	0.00086	0.00067	0.00000	0.00036	0.00000	0.00000	0.00000	0.16880	0.40357	0.01932	0.02529
RT	Diesel	1.00000	1.00000	0.99540	0.99796	0.99766	0.99914	0.99933	1.00000	0.99964	1.00000	1.00000	1.00000	0.83120	0.59643	0.98068	0.97471
SUShT	Gas	0.28371	0.33230	0.38345	0.33104	0.27171	0.27333	0.24922	0.25725	0.25116	0.27492	0.30235	0.36286	0.32519	0.41346	0.41543	0.38278
SUShT	Diesel	0.71629	0.66770	0.61655	0.66896	0.72829	0.72667	0.75078	0.74275	0.74884	0.72508	0.69765	0.63714	0.67481	0.58654	0.58457	0.61722
SULhT	Gas	0.28371	0.33230	0.38345	0.33104	0.27171	0.27333	0.24922	0.25725	0.25116	0.27492	0.30235	0.36286	0.32519	0.41346	0.41543	0.38278
SULhT	Diesel	0.71629	0.66770	0.61655	0.66896	0.72829	0.72667	0.75078	0.74275	0.74884	0.72508	0.69765	0.63714	0.67481	0.58654	0.58457	0.61722
MH	Gas	0.70133	0.00585	0.53388	0.38083	0.44201	0.57780	0.34935	0.60161	0.56194	0.60280	0.54586	0.65392	0.79746	0.64940	0.83607	0.80080
MH	Diesel	0.29867	0.99415	0.46612	0.61917	0.55799	0.42220	0.65065	0.39839	0.43806	0.39720	0.45414	0.34608	0.20254	0.35060	0.16393	0.19920
CShT	Gas	0.06454	0.07675	0.07693	0.07895	0.05434	0.06493	0.06068	0.07687	0.08587	0.09318	0.09572	0.11042	0.11049	0.10920	0.12175	0.11853
CShT	Diesel	0.93546	0.92325	0.92307	0.92105	0.94566	0.93507	0.93932	0.92313	0.91413	0.90682	0.90428	0.88958	0.88951	0.89080	0.87825	0.88147
CLhT	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

[1] Conventional internal combustion engine technology only.

Texas Statewide 2011 Fuel Engine Fractions Summary by Model Year - Continued

SUT	Fuel Type	1995	1994	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
MC	Gas	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
PC	Gas	0.99906	0.99985	0.99931	0.99883	0.99718	0.99894	0.99909	0.99974	0.98723	0.99112	0.96625	0.95565	0.92268	0.89328	0.92360
PC	Diesel	0.00094	0.00015	0.00069	0.00117	0.00282	0.00106	0.00091	0.00026	0.01277	0.00888	0.03375	0.04435	0.07732	0.10672	0.07640
PT	Gas	0.96088	0.96624	0.95751	0.96186	0.96598	0.96917	0.97412	0.98041	0.97672	0.95048	0.94678	0.93418	0.92336	0.88046	0.94928
PT	Diesel	0.03912	0.03376	0.04249	0.03814	0.03402	0.03083	0.02588	0.01959	0.02328	0.04952	0.05322	0.06582	0.07664	0.11954	0.05072
LCT	Gas	0.90831	0.92119	0.90559	0.92221	0.91873	0.92593	0.93758	0.93686	0.93504	0.86194	0.86903	0.86054	0.92322	0.91890	0.98055
LCT	Diesel	0.09169	0.07881	0.09441	0.07779	0.08127	0.07407	0.06242	0.06314	0.06496	0.13806	0.13097	0.13946	0.07678	0.08110	0.01945
OBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
TBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
SBus	Gas	0.11428	0.14748	0.12054	0.01004	0.08954	0.12404	0.22904	0.24977	0.26555	0.32671	0.48445	0.61548	0.67620	0.67404	0.73606
SBus	Diesel	0.88572	0.85252	0.87946	0.98996	0.91046	0.87596	0.77096	0.75023	0.73445	0.67329	0.51555	0.38452	0.32380	0.32596	0.26394
RT	Gas	0.02354	0.10504	0.03148	0.21028	0.10123	0.20399	0.02945	0.11391	0.11412	0.07103	0.05865	0.06076	0.10813	0.09538	0.04000
RT	Diesel	0.97646	0.89496	0.96852	0.78972	0.89877	0.79601	0.97055	0.88609	0.88588	0.92897	0.94135	0.93924	0.89187	0.90462	0.96000
SUShT	Gas	0.62329	0.50178	0.49004	0.49383	0.50690	0.54528	0.78230	0.78230	0.78230	0.78230	0.78230	0.78230	0.78230	0.78230	0.78230
SUShT	Diesel	0.37671	0.49822	0.50996	0.50617	0.49310	0.45472	0.21770	0.21770	0.21770	0.21770	0.21770	0.21770	0.21770	0.21770	0.21770
SULhT	Gas	0.62329	0.50178	0.49004	0.49383	0.50690	0.54528	0.78230	0.78230	0.78230	0.78230	0.78230	0.78230	0.78230	0.78230	0.78230
SULhT	Diesel	0.37671	0.49822	0.50996	0.50617	0.49310	0.45472	0.21770	0.21770	0.21770	0.21770	0.21770	0.21770	0.21770	0.21770	0.21770
MH	Gas	0.85102	0.80835	0.72757	0.78687	0.84972	0.91993	0.95133	0.98056	0.99176	0.98963	0.99404	0.99606	0.99335	0.97222	0.97796
MH	Diesel	0.14898	0.19165	0.27243	0.21313	0.15028	0.08007	0.04867	0.01944	0.00824	0.01037	0.00596	0.00394	0.00665	0.02778	0.02204
CShT	Gas	0.20831	0.10032	0.10421	0.11622	0.14152	0.13698	0.25559	0.25559	0.25559	0.25559	0.25559	0.25559	0.25559	0.25559	0.25559
CShT	Diesel	0.79169	0.89968	0.89579	0.88378	0.85848	0.86302	0.74441	0.74441	0.74441	0.74441	0.74441	0.74441	0.74441	0.74441	0.74441
CLhT	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

[1] Conventional internal combustion engine technology only.

Texas Statewide 2017 Fuel Engine Fractions Summary

SUT	Fuel Type	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
MC	Gas	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
PC	Gas	0.96977	0.94863	0.93751	0.94365	0.94020	0.93965	0.90306	0.93570	0.94665	0.94784	0.96924	0.95752	0.98121	0.98710	0.98163	0.98742
PC	Diesel	0.00026	0.00121	0.02417	0.01499	0.01354	0.01261	0.01177	0.01061	0.00779	0.00069	0.00047	0.00695	0.00491	0.00338	0.00416	0.00464
PT	Gas	0.84358	0.82315	0.76837	0.77491	0.69407	0.68589	0.75726	0.79406	0.84100	0.88674	0.85626	0.91131	0.91051	0.89189	0.85736	0.87238
PT	Diesel	0.03894	0.03474	0.03031	0.02373	0.02009	0.02645	0.02341	0.01328	0.01718	0.03004	0.02790	0.04402	0.03595	0.04059	0.03865	0.03470
LCT	Gas	0.84358	0.82315	0.76837	0.61614	0.59432	0.62654	0.62303	0.63823	0.76558	0.81321	0.81565	0.85179	0.86984	0.85968	0.84007	0.84304
LCT	Diesel	0.03894	0.03474	0.03031	0.02627	0.03117	0.05619	0.06012	0.03476	0.04654	0.08017	0.06792	0.09978	0.08519	0.09267	0.08413	0.08484
OBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
TBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
SBus	Gas	0.00791	0.00791	0.00791	0.00791	0.03703	0.04500	0.03143	0.03886	0.02749	0.01298	0.00778	0.01011	0.00660	0.00377	0.00554	0.02596
SBus	Diesel	0.99209	0.99209	0.99209	0.99209	0.96297	0.95500	0.96857	0.96114	0.97251	0.98702	0.99222	0.98989	0.99340	0.99623	0.99446	0.97404
RT	Gas	0.00000	0.00000	0.00000	0.00000	0.00659	0.00000	0.00000	0.00000	0.00460	0.00204	0.00234	0.00086	0.00067	0.00000	0.00036	0.00000
RT	Diesel	1.00000	1.00000	1.00000	1.00000	0.99341	1.00000	1.00000	1.00000	0.99540	0.99796	0.99766	0.99914	0.99933	1.00000	0.99964	1.00000
SUShT	Gas	0.49915	0.48981	0.44286	0.40011	0.42137	0.27545	0.28371	0.33230	0.38345	0.33104	0.27171	0.27333	0.24922	0.25725	0.25116	0.27492
SUShT	Diesel	0.50085	0.51019	0.55714	0.59989	0.57863	0.72455	0.71629	0.66770	0.61655	0.66896	0.72829	0.72667	0.75078	0.74275	0.74884	0.72508
SULhT	Gas	0.49915	0.48981	0.44286	0.40011	0.42137	0.27545	0.28371	0.33230	0.38345	0.33104	0.27171	0.27333	0.24922	0.25725	0.25116	0.27492
SULhT	Diesel	0.50085	0.51019	0.55714	0.59989	0.57863	0.72455	0.71629	0.66770	0.61655	0.66896	0.72829	0.72667	0.75078	0.74275	0.74884	0.72508
MH	Gas	0.57965	0.57965	0.57965	0.57965	0.70761	0.72513	0.70133	0.00585	0.53388	0.38083	0.44201	0.57780	0.34935	0.60161	0.56194	0.60280
MH	Diesel	0.42035	0.42035	0.42035	0.42035	0.29239	0.27487	0.29867	0.99415	0.46612	0.61917	0.55799	0.42220	0.65065	0.39839	0.43806	0.39720
CShT	Gas	0.10616	0.09304	0.07303	0.09762	0.08697	0.08114	0.06454	0.07675	0.07693	0.07895	0.05434	0.06493	0.06068	0.07687	0.08587	0.09318
CShT	Diesel	0.89384	0.90696	0.92697	0.90238	0.91303	0.91886	0.93546	0.92325	0.92307	0.92105	0.94566	0.93507	0.93932	0.92313	0.91413	0.90682
CLhT	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

[1] Conventional internal combustion engine technology only.

Texas Statewide 2017 Fuel Engine Fractions Summary – Continued

SUT	Fuel Type	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987
MC	Gas	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
PC	Gas	0.98724	0.98443	0.98118	0.98877	0.99909	0.99876	0.99906	0.99985	0.99931	0.99883	0.99718	0.99894	0.99909	0.99974	0.98723
PC	Diesel	0.00335	0.00309	0.00188	0.00221	0.00091	0.00124	0.00094	0.00015	0.00069	0.00117	0.00282	0.00106	0.00091	0.00026	0.01277
PT	Gas	0.92153	0.90560	0.90991	0.97211	0.95551	0.95753	0.96088	0.96624	0.95751	0.96186	0.96598	0.96917	0.97412	0.98041	0.97672
PT	Diesel	0.04103	0.02973	0.03925	0.01280	0.04449	0.04247	0.03912	0.03376	0.04249	0.03814	0.03402	0.03083	0.02588	0.01959	0.02328
LCT	Gas	0.88196	0.87280	0.86328	0.94144	0.89876	0.90704	0.90831	0.92119	0.90559	0.92221	0.91873	0.92593	0.93758	0.93686	0.93504
LCT	Diesel	0.08819	0.07731	0.09860	0.04495	0.10124	0.09296	0.09169	0.07881	0.09441	0.07779	0.08127	0.07407	0.06242	0.06314	0.06496
OBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
TBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
SBus	Gas	0.01166	0.02569	0.01000	0.01000	0.01000	0.04154	0.11428	0.14748	0.12054	0.01004	0.08954	0.12404	0.22904	0.24977	0.26555
SBus	Diesel	0.98834	0.97431	0.99000	0.99000	0.99000	0.95846	0.88572	0.85252	0.87946	0.98996	0.91046	0.87596	0.77096	0.75023	0.73445
RT	Gas	0.00000	0.00000	0.16880	0.40357	0.01932	0.02529	0.02354	0.10504	0.03148	0.21028	0.10123	0.20399	0.02945	0.11391	0.11412
RT	Diesel	1.00000	1.00000	0.83120	0.59643	0.98068	0.97471	0.97646	0.89496	0.96852	0.78972	0.89877	0.79601	0.97055	0.88609	0.88588
SUShT	Gas	0.30235	0.36286	0.32519	0.41346	0.41543	0.38278	0.62329	0.50178	0.49004	0.49383	0.50690	0.54528	0.78230	0.78230	0.78230
SUShT	Diesel	0.69765	0.63714	0.67481	0.58654	0.58457	0.61722	0.37671	0.49822	0.50996	0.50617	0.49310	0.45472	0.21770	0.21770	0.21770
SULhT	Gas	0.30235	0.36286	0.32519	0.41346	0.41543	0.38278	0.62329	0.50178	0.49004	0.49383	0.50690	0.54528	0.78230	0.78230	0.78230
SULhT	Diesel	0.69765	0.63714	0.67481	0.58654	0.58457	0.61722	0.37671	0.49822	0.50996	0.50617	0.49310	0.45472	0.21770	0.21770	0.21770
MH	Gas	0.54586	0.65392	0.79746	0.64940	0.83607	0.80080	0.85102	0.80835	0.72757	0.78687	0.84972	0.91993	0.95133	0.98056	0.99176
MH	Diesel	0.45414	0.34608	0.20254	0.35060	0.16393	0.19920	0.14898	0.19165	0.27243	0.21313	0.15028	0.08007	0.04867	0.01944	0.00824
CShT	Gas	0.09572	0.11042	0.11049	0.10920	0.12175	0.11853	0.20831	0.10032	0.10421	0.11622	0.14152	0.13698	0.25559	0.25559	0.25559
CShT	Diesel	0.90428	0.88958	0.88951	0.89080	0.87825	0.88147	0.79169	0.89968	0.89579	0.88378	0.85848	0.86302	0.74441	0.74441	0.74441
CLhT	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

[1] Conventional internal combustion engine technology only.

Texas Statewide 2018 Fuel Engine Fractions Summary

SUT	Fuel Type	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
MC	Gas	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
PC	Gas	0.96933	0.96977	0.94863	0.93751	0.94365	0.94020	0.93965	0.90306	0.93570	0.94665	0.94784	0.96924	0.95752	0.98121	0.98710	0.98163
PC	Diesel	0.00108	0.00026	0.00121	0.02417	0.01499	0.01354	0.01261	0.01177	0.01061	0.00779	0.00069	0.00047	0.00695	0.00491	0.00338	0.00416
PT	Gas	0.83585	0.84358	0.82315	0.76837	0.77491	0.69407	0.68589	0.75726	0.79406	0.84100	0.88674	0.85626	0.91131	0.91051	0.89189	0.85736
PT	Diesel	0.04653	0.03894	0.03474	0.03031	0.02373	0.02009	0.02645	0.02341	0.01328	0.01718	0.03004	0.02790	0.04402	0.03595	0.04059	0.03865
LCT	Gas	0.83585	0.84358	0.82315	0.76837	0.61614	0.59432	0.62654	0.62303	0.63823	0.76558	0.81321	0.81565	0.85179	0.86984	0.85968	0.84007
LCT	Diesel	0.04653	0.03894	0.03474	0.03031	0.02627	0.03117	0.05619	0.06012	0.03476	0.04654	0.08017	0.06792	0.09978	0.08519	0.09267	0.08413
OBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
TBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
SBus	Gas	0.00791	0.00791	0.00791	0.00791	0.00791	0.03703	0.04500	0.03143	0.03886	0.02749	0.01298	0.00778	0.01011	0.00660	0.00377	0.00554
SBus	Diesel	0.99209	0.99209	0.99209	0.99209	0.99209	0.96297	0.95500	0.96857	0.96114	0.97251	0.98702	0.99222	0.98989	0.99340	0.99623	0.99446
RT	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00659	0.00000	0.00000	0.00000	0.00460	0.00204	0.00234	0.00086	0.00067	0.00000	0.00036
RT	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	0.99341	1.00000	1.00000	1.00000	0.99540	0.99796	0.99766	0.99914	0.99933	1.00000	0.99964
SUShT	Gas	0.47430	0.49915	0.48981	0.44286	0.40011	0.42137	0.27545	0.28371	0.33230	0.38345	0.33104	0.27171	0.27333	0.24922	0.25725	0.25116
SUShT	Diesel	0.52570	0.50085	0.51019	0.55714	0.59989	0.57863	0.72455	0.71629	0.66770	0.61655	0.66896	0.72829	0.72667	0.75078	0.74275	0.74884
SULhT	Gas	0.47430	0.49915	0.48981	0.44286	0.40011	0.42137	0.27545	0.28371	0.33230	0.38345	0.33104	0.27171	0.27333	0.24922	0.25725	0.25116
SULhT	Diesel	0.52570	0.50085	0.51019	0.55714	0.59989	0.57863	0.72455	0.71629	0.66770	0.61655	0.66896	0.72829	0.72667	0.75078	0.74275	0.74884
MH	Gas	0.57965	0.57965	0.57965	0.57965	0.57965	0.70761	0.72513	0.70133	0.00585	0.53388	0.38083	0.44201	0.57780	0.34935	0.60161	0.56194
MH	Diesel	0.42035	0.42035	0.42035	0.42035	0.42035	0.29239	0.27487	0.29867	0.99415	0.46612	0.61917	0.55799	0.42220	0.65065	0.39839	0.43806
CShT	Gas	0.09098	0.10616	0.09304	0.07303	0.09762	0.08697	0.08114	0.06454	0.07675	0.07693	0.07895	0.05434	0.06493	0.06068	0.07687	0.08587
CShT	Diesel	0.90902	0.89384	0.90696	0.92697	0.90238	0.91303	0.91886	0.93546	0.92325	0.92307	0.92105	0.94566	0.93507	0.93932	0.92313	0.91413
CLhT	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

[1] Conventional internal combustion engine technology only.

Texas Statewide 2018 Fuel Engine Fractions Summary – Continued

SUT	Fuel Type	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988
MC	Gas	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
PC	Gas	0.98742	0.98724	0.98443	0.98118	0.98877	0.99909	0.99876	0.99906	0.99985	0.99931	0.99883	0.99718	0.99894	0.99909	0.99974
PC	Diesel	0.00464	0.00335	0.00309	0.00188	0.00221	0.00091	0.00124	0.00094	0.00015	0.00069	0.00117	0.00282	0.00106	0.00091	0.00026
PT	Gas	0.87238	0.92153	0.90560	0.90991	0.97211	0.95551	0.95753	0.96088	0.96624	0.95751	0.96186	0.96598	0.96917	0.97412	0.98041
PT	Diesel	0.03470	0.04103	0.02973	0.03925	0.01280	0.04449	0.04247	0.03912	0.03376	0.04249	0.03814	0.03402	0.03083	0.02588	0.01959
LCT	Gas	0.84304	0.88196	0.87280	0.86328	0.94144	0.89876	0.90704	0.90831	0.92119	0.90559	0.92221	0.91873	0.92593	0.93758	0.93686
LCT	Diesel	0.08484	0.08819	0.07731	0.09860	0.04495	0.10124	0.09296	0.09169	0.07881	0.09441	0.07779	0.08127	0.07407	0.06242	0.06314
OBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
TBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
SBus	Gas	0.02596	0.01166	0.02569	0.01000	0.01000	0.01000	0.04154	0.11428	0.14748	0.12054	0.01004	0.08954	0.12404	0.22904	0.24977
SBus	Diesel	0.97404	0.98834	0.97431	0.99000	0.99000	0.99000	0.95846	0.88572	0.85252	0.87946	0.98996	0.91046	0.87596	0.77096	0.75023
RT	Gas	0.00000	0.00000	0.00000	0.16880	0.40357	0.01932	0.02529	0.02354	0.10504	0.03148	0.21028	0.10123	0.20399	0.02945	0.11391
RT	Diesel	1.00000	1.00000	1.00000	0.83120	0.59643	0.98068	0.97471	0.97646	0.89496	0.96852	0.78972	0.89877	0.79601	0.97055	0.88609
SUShT	Gas	0.27492	0.30235	0.36286	0.32519	0.41346	0.41543	0.38278	0.62329	0.50178	0.49004	0.49383	0.50690	0.54528	0.78230	0.78230
SUShT	Diesel	0.72508	0.69765	0.63714	0.67481	0.58654	0.58457	0.61722	0.37671	0.49822	0.50996	0.50617	0.49310	0.45472	0.21770	0.21770
SULhT	Gas	0.27492	0.30235	0.36286	0.32519	0.41346	0.41543	0.38278	0.62329	0.50178	0.49004	0.49383	0.50690	0.54528	0.78230	0.78230
SULhT	Diesel	0.72508	0.69765	0.63714	0.67481	0.58654	0.58457	0.61722	0.37671	0.49822	0.50996	0.50617	0.49310	0.45472	0.21770	0.21770
MH	Gas	0.60280	0.54586	0.65392	0.79746	0.64940	0.83607	0.80080	0.85102	0.80835	0.72757	0.78687	0.84972	0.91993	0.95133	0.98056
MH	Diesel	0.39720	0.45414	0.34608	0.20254	0.35060	0.16393	0.19920	0.14898	0.19165	0.27243	0.21313	0.15028	0.08007	0.04867	0.01944
CShT	Gas	0.09318	0.09572	0.11042	0.11049	0.10920	0.12175	0.11853	0.20831	0.10032	0.10421	0.11622	0.14152	0.13698	0.25559	0.25559
CShT	Diesel	0.90682	0.90428	0.88958	0.88951	0.89080	0.87825	0.88147	0.79169	0.89968	0.89579	0.88378	0.85848	0.86302	0.74441	0.74441
CLhT	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

[1] Conventional internal combustion engine technology only.

Texas Statewide 2020 Fuel Engine Fractions Summary

SUT	Fuel Type	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
MC	Gas	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
PC	Gas	0.96427	0.96679	0.96933	0.96977	0.94863	0.93751	0.94365	0.94020	0.93965	0.90306	0.93570	0.94665	0.94784	0.96924	0.95752	0.98121
PC	Diesel	0.00570	0.00334	0.00108	0.00026	0.00121	0.02417	0.01499	0.01354	0.01261	0.01177	0.01061	0.00779	0.00069	0.00047	0.00695	0.00491
PT	Gas	0.82007	0.82756	0.83585	0.84358	0.82315	0.76837	0.77491	0.69407	0.68589	0.75726	0.79406	0.84100	0.88674	0.85626	0.91131	0.91051
PT	Diesel	0.06285	0.05514	0.04653	0.03894	0.03474	0.03031	0.02373	0.02009	0.02645	0.02341	0.01328	0.01718	0.03004	0.02790	0.04402	0.03595
LCT	Gas	0.82007	0.82756	0.83585	0.84358	0.82315	0.76837	0.61614	0.59432	0.62654	0.62303	0.63823	0.76558	0.81321	0.81565	0.85179	0.86984
LCT	Diesel	0.06285	0.05514	0.04653	0.03894	0.03474	0.03031	0.02627	0.03117	0.05619	0.06012	0.03476	0.04654	0.08017	0.06792	0.09978	0.08519
OBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
TBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
SBus	Gas	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.03703	0.04500	0.03143	0.03886	0.02749	0.01298	0.00778	0.01011	0.00660
SBus	Diesel	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.96297	0.95500	0.96857	0.96114	0.97251	0.98702	0.99222	0.98989	0.99340
RT	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00659	0.00000	0.00000	0.00000	0.00460	0.00204	0.00234	0.00086	0.00067
RT	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.99341	1.00000	1.00000	1.00000	0.99540	0.99796	0.99766	0.99914	0.99933
SUShT	Gas	0.51864	0.51864	0.47430	0.49915	0.48981	0.44286	0.40011	0.42137	0.27545	0.28371	0.33230	0.38345	0.33104	0.27171	0.27333	0.24922
SUShT	Diesel	0.48136	0.48136	0.52570	0.50085	0.51019	0.55714	0.59989	0.57863	0.72455	0.71629	0.66770	0.61655	0.66896	0.72829	0.72667	0.75078
SULhT	Gas	0.51864	0.51864	0.47430	0.49915	0.48981	0.44286	0.40011	0.42137	0.27545	0.28371	0.33230	0.38345	0.33104	0.27171	0.27333	0.24922
SULhT	Diesel	0.48136	0.48136	0.52570	0.50085	0.51019	0.55714	0.59989	0.57863	0.72455	0.71629	0.66770	0.61655	0.66896	0.72829	0.72667	0.75078
MH	Gas	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.70761	0.72513	0.70133	0.00585	0.53388	0.38083	0.44201	0.57780	0.34935
MH	Diesel	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.29239	0.27487	0.29867	0.99415	0.46612	0.61917	0.55799	0.42220	0.65065
CShT	Gas	0.08061	0.08061	0.09098	0.10616	0.09304	0.07303	0.09762	0.08697	0.08114	0.06454	0.07675	0.07693	0.07895	0.05434	0.06493	0.06068
CShT	Diesel	0.91939	0.91939	0.90902	0.89384	0.90696	0.92697	0.90238	0.91303	0.91886	0.93546	0.92325	0.92307	0.92105	0.94566	0.93507	0.93932
CLhT	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

[1] Conventional internal combustion engine technology only.

Texas Statewide 2020 Fuel Engine Fractions Summary – Continued

SUT	Fuel Type	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
MC	Gas	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
PC	Gas	0.98710	0.98163	0.98742	0.98724	0.98443	0.98118	0.98877	0.99909	0.99876	0.99906	0.99985	0.99931	0.99883	0.99718	0.99894
PC	Diesel	0.00338	0.00416	0.00464	0.00335	0.00309	0.00188	0.00221	0.00091	0.00124	0.00094	0.00015	0.00069	0.00117	0.00282	0.00106
PT	Gas	0.89189	0.85736	0.87238	0.92153	0.90560	0.90991	0.97211	0.95551	0.95753	0.96088	0.96624	0.95751	0.96186	0.96598	0.96917
PT	Diesel	0.04059	0.03865	0.03470	0.04103	0.02973	0.03925	0.01280	0.04449	0.04247	0.03912	0.03376	0.04249	0.03814	0.03402	0.03083
LCT	Gas	0.85968	0.84007	0.84304	0.88196	0.87280	0.86328	0.94144	0.89876	0.90704	0.90831	0.92119	0.90559	0.92221	0.91873	0.92593
LCT	Diesel	0.09267	0.08413	0.08484	0.08819	0.07731	0.09860	0.04495	0.10124	0.09296	0.09169	0.07881	0.09441	0.07779	0.08127	0.07407
OBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
TBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
SBus	Gas	0.00377	0.00554	0.02596	0.01166	0.02569	0.01000	0.01000	0.01000	0.04154	0.11428	0.14748	0.12054	0.01004	0.08954	0.12404
SBus	Diesel	0.99623	0.99446	0.97404	0.98834	0.97431	0.99000	0.99000	0.99000	0.95846	0.88572	0.85252	0.87946	0.98996	0.91046	0.87596
RT	Gas	0.00000	0.00036	0.00000	0.00000	0.00000	0.16880	0.40357	0.01932	0.02529	0.02354	0.10504	0.03148	0.21028	0.10123	0.20399
RT	Diesel	1.00000	0.99964	1.00000	1.00000	1.00000	0.83120	0.59643	0.98068	0.97471	0.97646	0.89496	0.96852	0.78972	0.89877	0.79601
SUShT	Gas	0.25725	0.25116	0.27492	0.30235	0.36286	0.32519	0.41346	0.41543	0.38278	0.62329	0.50178	0.49004	0.49383	0.50690	0.54528
SUShT	Diesel	0.74275	0.74884	0.72508	0.69765	0.63714	0.67481	0.58654	0.58457	0.61722	0.37671	0.49822	0.50996	0.50617	0.49310	0.45472
SULhT	Gas	0.25725	0.25116	0.27492	0.30235	0.36286	0.32519	0.41346	0.41543	0.38278	0.62329	0.50178	0.49004	0.49383	0.50690	0.54528
SULhT	Diesel	0.74275	0.74884	0.72508	0.69765	0.63714	0.67481	0.58654	0.58457	0.61722	0.37671	0.49822	0.50996	0.50617	0.49310	0.45472
MH	Gas	0.60161	0.56194	0.60280	0.54586	0.65392	0.79746	0.64940	0.83607	0.80080	0.85102	0.80835	0.72757	0.78687	0.84972	0.91993
MH	Diesel	0.39839	0.43806	0.39720	0.45414	0.34608	0.20254	0.35060	0.16393	0.19920	0.14898	0.19165	0.27243	0.21313	0.15028	0.08007
CShT	Gas	0.07687	0.08587	0.09318	0.09572	0.11042	0.11049	0.10920	0.12175	0.11853	0.20831	0.10032	0.10421	0.11622	0.14152	0.13698
CShT	Diesel	0.92313	0.91413	0.90682	0.90428	0.88958	0.88951	0.89080	0.87825	0.88147	0.79169	0.89968	0.89579	0.88378	0.85848	0.86302
CLhT	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

[1] Conventional internal combustion engine technology only.

Texas Statewide 2023 Fuel Engine Fractions Summary

SUT	Fuel Type	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
MC	Gas	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
PC	Gas	0.96022	0.96167	0.96311	0.96427	0.96679	0.96933	0.96977	0.94863	0.93751	0.94365	0.94020	0.93965	0.90306	0.93570	0.94665	0.94784
PC	Diesel	0.00922	0.00779	0.00656	0.00570	0.00334	0.00108	0.00026	0.00121	0.02417	0.01499	0.01354	0.01261	0.01177	0.01061	0.00779	0.00069
PT	Gas	0.81557	0.81665	0.81850	0.82007	0.82756	0.83585	0.84358	0.82315	0.76837	0.77491	0.69407	0.68589	0.75726	0.79406	0.84100	0.88674
PT	Diesel	0.06775	0.06632	0.06441	0.06285	0.05514	0.04653	0.03894	0.03474	0.03031	0.02373	0.02009	0.02645	0.02341	0.01328	0.01718	0.03004
LCT	Gas	0.81557	0.81665	0.81850	0.82007	0.82756	0.83585	0.84358	0.82315	0.76837	0.61614	0.59432	0.62654	0.62303	0.63823	0.76558	0.81321
LCT	Diesel	0.06775	0.06632	0.06441	0.06285	0.05514	0.04653	0.03894	0.03474	0.03031	0.02627	0.03117	0.05619	0.06012	0.03476	0.04654	0.08017
OBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
TBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
SBus	Gas	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.03703	0.04500	0.03143	0.03886	0.02749	0.01298
SBus	Diesel	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.96297	0.95500	0.96857	0.96114	0.97251	0.98702
RT	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00659	0.00000	0.00000	0.00000	0.00460	0.00204
RT	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.99341	1.00000	1.00000	1.00000	0.99540	0.99796
SUShT	Gas	0.51864	0.51864	0.51864	0.51864	0.51864	0.47430	0.49915	0.48981	0.44286	0.40011	0.42137	0.27545	0.28371	0.33230	0.38345	0.33104
SUShT	Diesel	0.48136	0.48136	0.48136	0.48136	0.48136	0.52570	0.50085	0.51019	0.55714	0.59989	0.57863	0.72455	0.71629	0.66770	0.61655	0.66896
SULhT	Gas	0.51864	0.51864	0.51864	0.51864	0.51864	0.47430	0.49915	0.48981	0.44286	0.40011	0.42137	0.27545	0.28371	0.33230	0.38345	0.33104
SULhT	Diesel	0.48136	0.48136	0.48136	0.48136	0.48136	0.52570	0.50085	0.51019	0.55714	0.59989	0.57863	0.72455	0.71629	0.66770	0.61655	0.66896
MH	Gas	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.70761	0.72513	0.70133	0.00585	0.53388	0.38083
MH	Diesel	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.29239	0.27487	0.29867	0.99415	0.46612	0.61917
CShT	Gas	0.08061	0.08061	0.08061	0.08061	0.08061	0.09098	0.10616	0.09304	0.07303	0.09762	0.08697	0.08114	0.06454	0.07675	0.07693	0.07895
CShT	Diesel	0.91939	0.91939	0.91939	0.91939	0.91939	0.90902	0.89384	0.90696	0.92697	0.90238	0.91303	0.91886	0.93546	0.92325	0.92307	0.92105
CLhT	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

[1] Conventional internal combustion engine technology only.

Texas Statewide 2023 Fuel Engine Fractions Summary – Continued

SUT	Fuel Type	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993
MC	Gas	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
PC	Gas	0.96924	0.95752	0.98121	0.98710	0.98163	0.98742	0.98724	0.98443	0.98118	0.98877	0.99909	0.99876	0.99906	0.99985	0.99931
PC	Diesel	0.00047	0.00695	0.00491	0.00338	0.00416	0.00464	0.00335	0.00309	0.00188	0.00221	0.00091	0.00124	0.00094	0.00015	0.00069
PT	Gas	0.85626	0.91131	0.91051	0.89189	0.85736	0.87238	0.92153	0.90560	0.90991	0.97211	0.95551	0.95753	0.96088	0.96624	0.95751
PT	Diesel	0.02790	0.04402	0.03595	0.04059	0.03865	0.03470	0.04103	0.02973	0.03925	0.01280	0.04449	0.04247	0.03912	0.03376	0.04249
LCT	Gas	0.81565	0.85179	0.86984	0.85968	0.84007	0.84304	0.88196	0.87280	0.86328	0.94144	0.89876	0.90704	0.90831	0.92119	0.90559
LCT	Diesel	0.06792	0.09978	0.08519	0.09267	0.08413	0.08484	0.08819	0.07731	0.09860	0.04495	0.10124	0.09296	0.09169	0.07881	0.09441
OBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
TBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
SBus	Gas	0.00778	0.01011	0.00660	0.00377	0.00554	0.02596	0.01166	0.02569	0.01000	0.01000	0.01000	0.04154	0.11428	0.14748	0.12054
SBus	Diesel	0.99222	0.98989	0.99340	0.99623	0.99446	0.97404	0.98834	0.97431	0.99000	0.99000	0.99000	0.95846	0.88572	0.85252	0.87946
RT	Gas	0.00234	0.00086	0.00067	0.00000	0.00036	0.00000	0.00000	0.00000	0.16880	0.40357	0.01932	0.02529	0.02354	0.10504	0.03148
RT	Diesel	0.99766	0.99914	0.99933	1.00000	0.99964	1.00000	1.00000	1.00000	0.83120	0.59643	0.98068	0.97471	0.97646	0.89496	0.96852
SUShT	Gas	0.27171	0.27333	0.24922	0.25725	0.25116	0.27492	0.30235	0.36286	0.32519	0.41346	0.41543	0.38278	0.62329	0.50178	0.49004
SUShT	Diesel	0.72829	0.72667	0.75078	0.74275	0.74884	0.72508	0.69765	0.63714	0.67481	0.58654	0.58457	0.61722	0.37671	0.49822	0.50996
SULhT	Gas	0.27171	0.27333	0.24922	0.25725	0.25116	0.27492	0.30235	0.36286	0.32519	0.41346	0.41543	0.38278	0.62329	0.50178	0.49004
SULhT	Diesel	0.72829	0.72667	0.75078	0.74275	0.74884	0.72508	0.69765	0.63714	0.67481	0.58654	0.58457	0.61722	0.37671	0.49822	0.50996
MH	Gas	0.44201	0.57780	0.34935	0.60161	0.56194	0.60280	0.54586	0.65392	0.79746	0.64940	0.83607	0.80080	0.85102	0.80835	0.72757
MH	Diesel	0.55799	0.42220	0.65065	0.39839	0.43806	0.39720	0.45414	0.34608	0.20254	0.35060	0.16393	0.19920	0.14898	0.19165	0.27243
CShT	Gas	0.05434	0.06493	0.06068	0.07687	0.08587	0.09318	0.09572	0.11042	0.11049	0.10920	0.12175	0.11853	0.20831	0.10032	0.10421
CShT	Diesel	0.94566	0.93507	0.93932	0.92313	0.91413	0.90682	0.90428	0.88958	0.88951	0.89080	0.87825	0.88147	0.79169	0.89968	0.89579
CLhT	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

[1] Conventional internal combustion engine technology only.

Texas Statewide 2026 Fuel Engine Fractions Summary

SUT	Fuel Type	2026	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
MC	Gas	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
PC	Gas	0.95385	0.95639	0.95860	0.96022	0.96167	0.96311	0.96427	0.96679	0.96933	0.96977	0.94863	0.93751	0.94365	0.94020	0.93965	0.90306
PC	Diesel	0.01530	0.01282	0.01073	0.00922	0.00779	0.00656	0.00570	0.00334	0.00108	0.00026	0.00121	0.02417	0.01499	0.01354	0.01261	0.01177
PT	Gas	0.81433	0.81408	0.81494	0.81557	0.81665	0.81850	0.82007	0.82756	0.83585	0.84358	0.82315	0.76837	0.77491	0.69407	0.68589	0.75726
PT	Diesel	0.06864	0.06905	0.06837	0.06775	0.06632	0.06441	0.06285	0.05514	0.04653	0.03894	0.03474	0.03031	0.02373	0.02009	0.02645	0.02341
LCT	Gas	0.81433	0.81408	0.81494	0.81557	0.81665	0.81850	0.82007	0.82756	0.83585	0.84358	0.82315	0.76837	0.61614	0.59432	0.62654	0.62303
LCT	Diesel	0.06864	0.06905	0.06837	0.06775	0.06632	0.06441	0.06285	0.05514	0.04653	0.03894	0.03474	0.03031	0.02627	0.03117	0.05619	0.06012
OBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
TBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
SBus	Gas	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.03703	0.04500	0.03143
SBus	Diesel	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.96297	0.95500	0.96857
RT	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00659	0.00000	0.00000
RT	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.99341	1.00000	1.00000
SUShT	Gas	0.51864	0.51864	0.51864	0.51864	0.51864	0.51864	0.51864	0.51864	0.47430	0.49915	0.48981	0.44286	0.40011	0.42137	0.27545	0.28371
SUShT	Diesel	0.48136	0.48136	0.48136	0.48136	0.48136	0.48136	0.48136	0.48136	0.52570	0.50085	0.51019	0.55714	0.59989	0.57863	0.72455	0.71629
SULhT	Gas	0.51864	0.51864	0.51864	0.51864	0.51864	0.51864	0.51864	0.51864	0.47430	0.49915	0.48981	0.44286	0.40011	0.42137	0.27545	0.28371
SULhT	Diesel	0.48136	0.48136	0.48136	0.48136	0.48136	0.48136	0.48136	0.48136	0.52570	0.50085	0.51019	0.55714	0.59989	0.57863	0.72455	0.71629
MH	Gas	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.70761	0.72513	0.70133
MH	Diesel	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.29239	0.27487	0.29867
CShT	Gas	0.08061	0.08061	0.08061	0.08061	0.08061	0.08061	0.08061	0.08061	0.09098	0.10616	0.09304	0.07303	0.09762	0.08697	0.08114	0.06454
CShT	Diesel	0.91939	0.91939	0.91939	0.91939	0.91939	0.91939	0.91939	0.91939	0.90902	0.89384	0.90696	0.92697	0.90238	0.91303	0.91886	0.93546
CLhT	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

[1] Conventional internal combustion engine technology only.

Texas Statewide 2026 Fuel Engine Fractions Summary – Continued

SUT	Fuel Type	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996
MC	Gas	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
PC	Gas	0.93570	0.94665	0.94784	0.96924	0.95752	0.98121	0.98710	0.98163	0.98742	0.98724	0.98443	0.98118	0.98877	0.99909	0.99876
PC	Diesel	0.01061	0.00779	0.00069	0.00047	0.00695	0.00491	0.00338	0.00416	0.00464	0.00335	0.00309	0.00188	0.00221	0.00091	0.00124
PT	Gas	0.79406	0.84100	0.88674	0.85626	0.91131	0.91051	0.89189	0.85736	0.87238	0.92153	0.90560	0.90991	0.97211	0.95551	0.95753
PT	Diesel	0.01328	0.01718	0.03004	0.02790	0.04402	0.03595	0.04059	0.03865	0.03470	0.04103	0.02973	0.03925	0.01280	0.04449	0.04247
LCT	Gas	0.63823	0.76558	0.81321	0.81565	0.85179	0.86984	0.85968	0.84007	0.84304	0.88196	0.87280	0.86328	0.94144	0.89876	0.90704
LCT	Diesel	0.03476	0.04654	0.08017	0.06792	0.09978	0.08519	0.09267	0.08413	0.08484	0.08819	0.07731	0.09860	0.04495	0.10124	0.09296
OBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
TBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
SBus	Gas	0.03886	0.02749	0.01298	0.00778	0.01011	0.00660	0.00377	0.00554	0.02596	0.01166	0.02569	0.01000	0.01000	0.01000	0.04154
SBus	Diesel	0.96114	0.97251	0.98702	0.99222	0.98989	0.99340	0.99623	0.99446	0.97404	0.98834	0.97431	0.99000	0.99000	0.99000	0.95846
RT	Gas	0.00000	0.00460	0.00204	0.00234	0.00086	0.00067	0.00000	0.00036	0.00000	0.00000	0.00000	0.16880	0.40357	0.01932	0.02529
RT	Diesel	1.00000	0.99540	0.99796	0.99766	0.99914	0.99933	1.00000	0.99964	1.00000	1.00000	1.00000	0.83120	0.59643	0.98068	0.97471
SUShT	Gas	0.33230	0.38345	0.33104	0.27171	0.27333	0.24922	0.25725	0.25116	0.27492	0.30235	0.36286	0.32519	0.41346	0.41543	0.38278
SUShT	Diesel	0.66770	0.61655	0.66896	0.72829	0.72667	0.75078	0.74275	0.74884	0.72508	0.69765	0.63714	0.67481	0.58654	0.58457	0.61722
SULhT	Gas	0.33230	0.38345	0.33104	0.27171	0.27333	0.24922	0.25725	0.25116	0.27492	0.30235	0.36286	0.32519	0.41346	0.41543	0.38278
SULhT	Diesel	0.66770	0.61655	0.66896	0.72829	0.72667	0.75078	0.74275	0.74884	0.72508	0.69765	0.63714	0.67481	0.58654	0.58457	0.61722
MH	Gas	0.00585	0.53388	0.38083	0.44201	0.57780	0.34935	0.60161	0.56194	0.60280	0.54586	0.65392	0.79746	0.64940	0.83607	0.80080
MH	Diesel	0.99415	0.46612	0.61917	0.55799	0.42220	0.65065	0.39839	0.43806	0.39720	0.45414	0.34608	0.20254	0.35060	0.16393	0.19920
CShT	Gas	0.07675	0.07693	0.07895	0.05434	0.06493	0.06068	0.07687	0.08587	0.09318	0.09572	0.11042	0.11049	0.10920	0.12175	0.11853
CShT	Diesel	0.92325	0.92307	0.92105	0.94566	0.93507	0.93932	0.92313	0.91413	0.90682	0.90428	0.88958	0.88951	0.89080	0.87825	0.88147
CLhT	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

[1] Conventional internal combustion engine technology only.

Texas Statewide 2027 Fuel Engine Fractions Summary

SUT	Fuel Type	2027	2026	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
MC	Gas	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
PC	Gas	0.95023	0.95385	0.95639	0.95860	0.96022	0.96167	0.96311	0.96427	0.96679	0.96933	0.96977	0.94863	0.93751	0.94365	0.94020	0.93965
PC	Diesel	0.01797	0.01530	0.01282	0.01073	0.00922	0.00779	0.00656	0.00570	0.00334	0.00108	0.00026	0.00121	0.02417	0.01499	0.01354	0.01261
PT	Gas	0.81100	0.81433	0.81408	0.81494	0.81557	0.81665	0.81850	0.82007	0.82756	0.83585	0.84358	0.82315	0.76837	0.77491	0.69407	0.68589
PT	Diesel	0.06821	0.06864	0.06905	0.06837	0.06775	0.06632	0.06441	0.06285	0.05514	0.04653	0.03894	0.03474	0.03031	0.02373	0.02009	0.02645
LCT	Gas	0.81100	0.81433	0.81408	0.81494	0.81557	0.81665	0.81850	0.82007	0.82756	0.83585	0.84358	0.82315	0.76837	0.61614	0.59432	0.62654
LCT	Diesel	0.06821	0.06864	0.06905	0.06837	0.06775	0.06632	0.06441	0.06285	0.05514	0.04653	0.03894	0.03474	0.03031	0.02627	0.03117	0.05619
OBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
TBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
SBus	Gas	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.00791	0.03703	0.04500
SBus	Diesel	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.99209	0.96297	0.95500
RT	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00659	0.00000
RT	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.99341	1.00000
SUShT	Gas	0.51864	0.51864	0.51864	0.51864	0.51864	0.51864	0.51864	0.51864	0.51864	0.47430	0.49915	0.48981	0.44286	0.40011	0.42137	0.27545
SUShT	Diesel	0.48136	0.48136	0.48136	0.48136	0.48136	0.48136	0.48136	0.48136	0.48136	0.52570	0.50085	0.51019	0.55714	0.59989	0.57863	0.72455
SULhT	Gas	0.51864	0.51864	0.51864	0.51864	0.51864	0.51864	0.51864	0.51864	0.51864	0.47430	0.49915	0.48981	0.44286	0.40011	0.42137	0.27545
SULhT	Diesel	0.48136	0.48136	0.48136	0.48136	0.48136	0.48136	0.48136	0.48136	0.48136	0.52570	0.50085	0.51019	0.55714	0.59989	0.57863	0.72455
MH	Gas	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.57965	0.70761	0.72513
MH	Diesel	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.42035	0.29239	0.27487
CShT	Gas	0.08061	0.08061	0.08061	0.08061	0.08061	0.08061	0.08061	0.08061	0.08061	0.09098	0.10616	0.09304	0.07303	0.09762	0.08697	0.08114
CShT	Diesel	0.91939	0.91939	0.91939	0.91939	0.91939	0.91939	0.91939	0.91939	0.91939	0.90902	0.89384	0.90696	0.92697	0.90238	0.91303	0.91886
CLhT	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

[1] Conventional internal combustion engine technology only.

Texas Statewide 2027 Fuel Engine Fractions Summary – Continued

SUT	Fuel Type	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997
MC	Gas	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
PC	Gas	0.90306	0.93570	0.94665	0.94784	0.96924	0.95752	0.98121	0.98710	0.98163	0.98742	0.98724	0.98443	0.98118	0.98877	0.99909
PC	Diesel	0.01177	0.01061	0.00779	0.00069	0.00047	0.00695	0.00491	0.00338	0.00416	0.00464	0.00335	0.00309	0.00188	0.00221	0.00091
PT	Gas	0.75726	0.79406	0.84100	0.88674	0.85626	0.91131	0.91051	0.89189	0.85736	0.87238	0.92153	0.90560	0.90991	0.97211	0.95551
PT	Diesel	0.02341	0.01328	0.01718	0.03004	0.02790	0.04402	0.03595	0.04059	0.03865	0.03470	0.04103	0.02973	0.03925	0.01280	0.04449
LCT	Gas	0.62303	0.63823	0.76558	0.81321	0.81565	0.85179	0.86984	0.85968	0.84007	0.84304	0.88196	0.87280	0.86328	0.94144	0.89876
LCT	Diesel	0.06012	0.03476	0.04654	0.08017	0.06792	0.09978	0.08519	0.09267	0.08413	0.08484	0.08819	0.07731	0.09860	0.04495	0.10124
OBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
TBus	Gas	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TBus	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
SBus	Gas	0.03143	0.03886	0.02749	0.01298	0.00778	0.01011	0.00660	0.00377	0.00554	0.02596	0.01166	0.02569	0.01000	0.01000	0.01000
SBus	Diesel	0.96857	0.96114	0.97251	0.98702	0.99222	0.98989	0.99340	0.99623	0.99446	0.97404	0.98834	0.97431	0.99000	0.99000	0.99000
RT	Gas	0.00000	0.00000	0.00460	0.00204	0.00234	0.00086	0.00067	0.00000	0.00036	0.00000	0.00000	0.00000	0.16880	0.40357	0.01932
RT	Diesel	1.00000	1.00000	0.99540	0.99796	0.99766	0.99914	0.99933	1.00000	0.99964	1.00000	1.00000	1.00000	0.83120	0.59643	0.98068
SUShT	Gas	0.28371	0.33230	0.38345	0.33104	0.27171	0.27333	0.24922	0.25725	0.25116	0.27492	0.30235	0.36286	0.32519	0.41346	0.41543
SUShT	Diesel	0.71629	0.66770	0.61655	0.66896	0.72829	0.72667	0.75078	0.74275	0.74884	0.72508	0.69765	0.63714	0.67481	0.58654	0.58457
SULhT	Gas	0.28371	0.33230	0.38345	0.33104	0.27171	0.27333	0.24922	0.25725	0.25116	0.27492	0.30235	0.36286	0.32519	0.41346	0.41543
SULhT	Diesel	0.71629	0.66770	0.61655	0.66896	0.72829	0.72667	0.75078	0.74275	0.74884	0.72508	0.69765	0.63714	0.67481	0.58654	0.58457
MH	Gas	0.70133	0.00585	0.53388	0.38083	0.44201	0.57780	0.34935	0.60161	0.56194	0.60280	0.54586	0.65392	0.79746	0.64940	0.83607
MH	Diesel	0.29867	0.99415	0.46612	0.61917	0.55799	0.42220	0.65065	0.39839	0.43806	0.39720	0.45414	0.34608	0.20254	0.35060	0.16393
CShT	Gas	0.06454	0.07675	0.07693	0.07895	0.05434	0.06493	0.06068	0.07687	0.08587	0.09318	0.09572	0.11042	0.11049	0.10920	0.12175
CShT	Diesel	0.93546	0.92325	0.92307	0.92105	0.94566	0.93507	0.93932	0.92313	0.91413	0.90682	0.90428	0.88958	0.88951	0.89080	0.87825
CLhT	Diesel	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

[1] Conventional internal combustion engine technology only.