

Google Environmental Insight Explorer Data for Montgomery County- 2022

Montgomery County

Overview

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Montgomery County

Maryland, United States
Size: 1,312 km²
Population (2020): 1,081,363

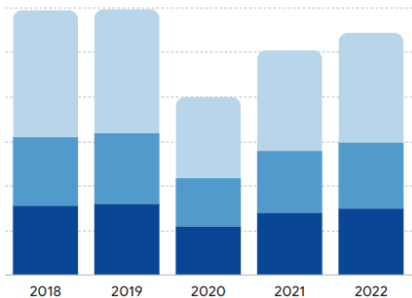


Transportation Emissions



Emissions over time

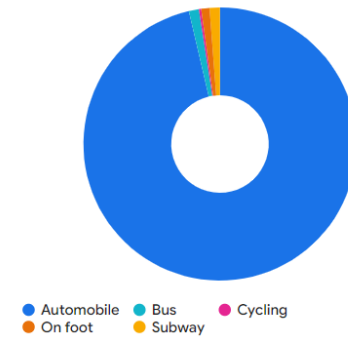
tCO₂e per year



Legend: In-boundary, Inbound, Outbound

Mode split

% of total distance traveled in 2022



Legend: Automobile, Bus, Cycling, On foot, Subway

Transportation emissions shown here are GPC Protocol compliant.

Explore Transportation

Building Emissions



tCO₂e per year

5,280,000

Total buildings
283,000

Measured floor area (m²)
94,300,000

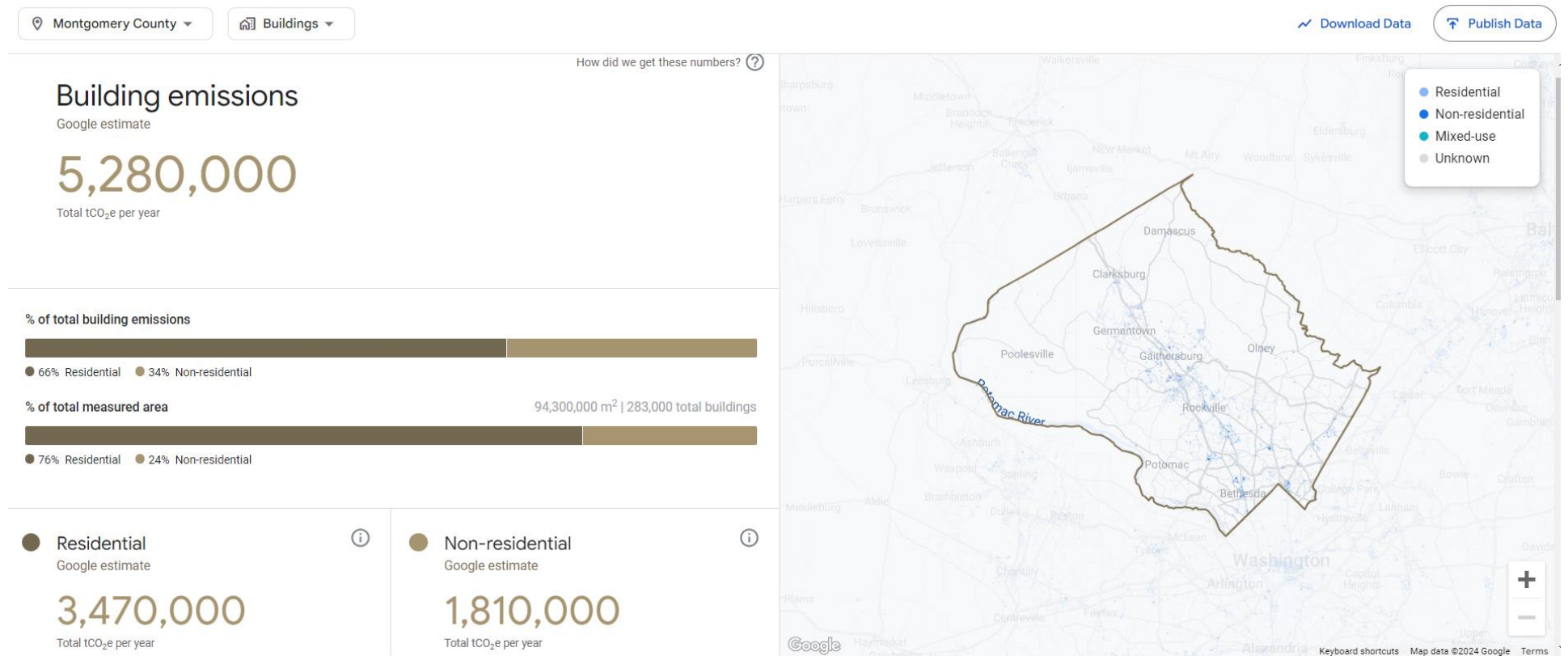
Building distribution



Map data ©2024 Google Terms

Explore Buildings

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About this data

Annual building emissions are calculated based on the aggregated floor space of the building by type, the consumption of the building (energy intensity) and the emissions associated with the type of energy consumed (grid intensity).

Floor space is modeled using data sourced from Google Maps, imagery, and 3D modeling. The location and size of buildings guide assumptions about whether a building is residential or non-residential, as well as the type of energy used.

Our energy consumption estimates apply regional assumptions from the Climate Action for Urban Sustainability (CURB) tool, an internationally recognized third-party data source.

Residential buildings include houses, apartments, or other living quarters.

Non-residential buildings include offices, retail, warehouses, and commercial buildings. Emissions from industrial and manufacturing facilities are not estimated separately.

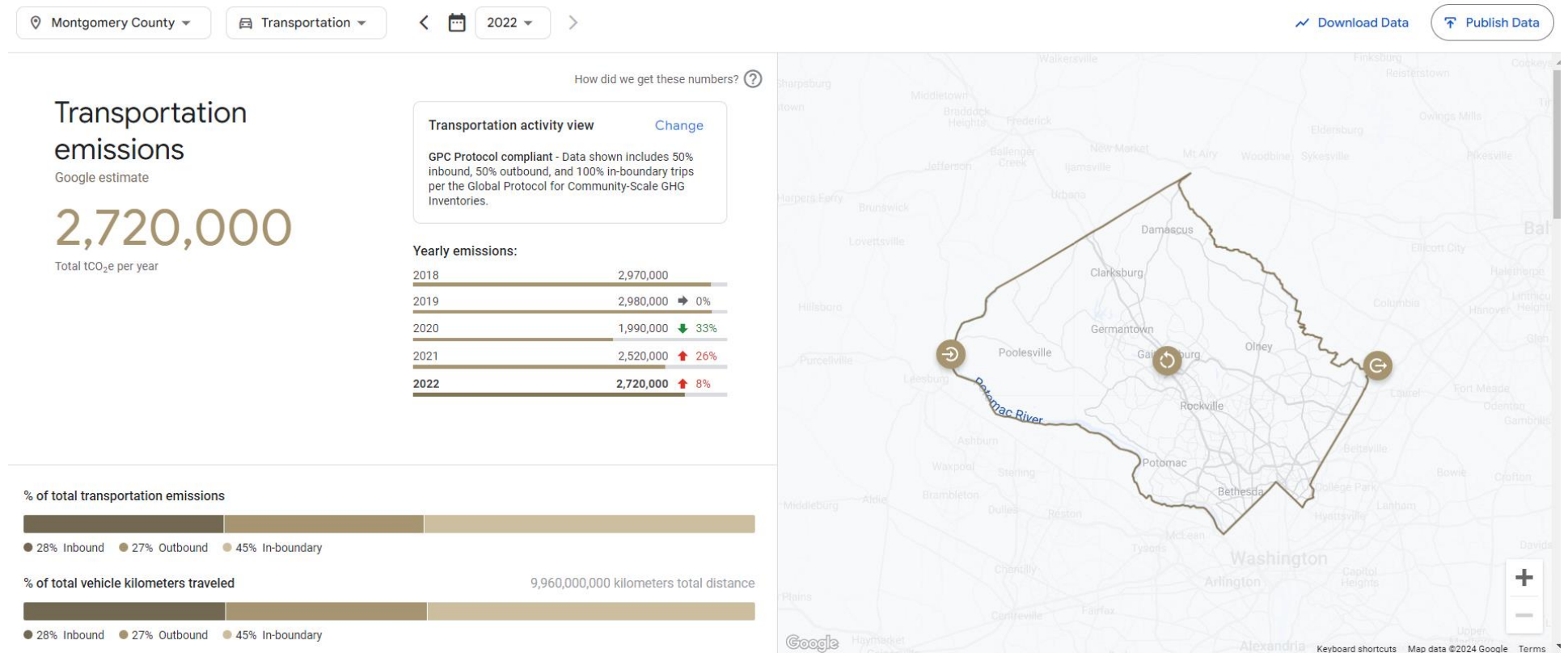
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Mixed-use buildings contain both residential and non-residential establishments.

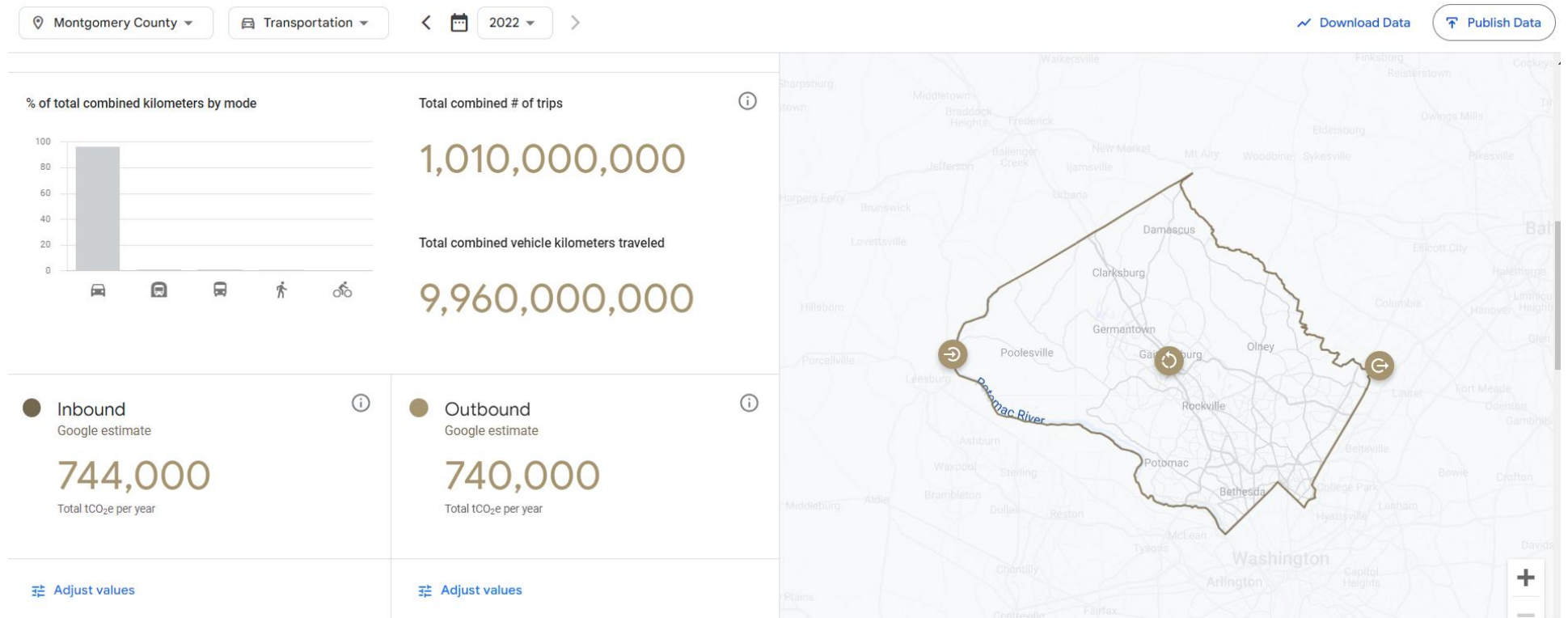
Our methodology is based upon accepted greenhouse gas accounting principles and is consistent across all cities and regions in the tool.

Other approaches, including those used to calculate this city's publicly reported emissions values, may yield different results based on data sources or methods of accounting.

- [Get more in-depth information in methodology](#)
- [Download the data](#)



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About this data

Annual transportation emissions are calculated based on an extrapolation of the total distance traveled for all trips taken, the types of vehicles and average fuel consumption of each mode.

Google's estimate is a total of all trips taken within a city boundary and trips that cross the city boundary.

Total distance traveled (vehicle miles or kilometers traveled) for all trips is aggregated and modeled to the entire city using aggregated location information from Google Location History and other sources.

The inferred mode of travel guides assumptions for the types of vehicles in the area, the average fuel type and consumption of each mode.

Regionally estimated average fuel consumption and emissions from the Climate Action for Urban Sustainability (CURB) tool applied to all trips for each mode.

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We apply regional assumptions from the Climate Action for Urban Sustainability (CURB) tool — an internationally recognized third-party data source — to estimate the energy consumption of buildings.

Our methodology is based upon accepted greenhouse gas accounting principles and is consistent across all cities in the tool.

Other approaches, including this city’s publicly reported emissions values, may use different sources of data or methods of a ccounting resulting in different values than our estimate here.

- [Get more in-depth information in methodology](#)
- [Download or export the data](#)
- Access C40 [report on EIE Transportation data for climate action planning](#)
- Access ICLEI Europe [assessment of EIE transportation data for European policymakers](#)
- To learn more about how cities are using EIE, [view our EIE 2021 City Impact report](#)

Data Tables

Building emissions

[Copy](#) [Download as CSV](#)

| sector | buildings | co2e tons | energy intensity | floor space | electricity intensity | electricity fraction | natural gas intensity | natural gas fraction | diesel oil intensity | diesel oil fraction | propane intensity | propane fraction |
|-----------------|-----------|-----------|------------------|-------------|-----------------------|----------------------|-----------------------|----------------------|----------------------|---------------------|-------------------|------------------|
| RESIDENTIAL | 264665 | 3473000 | 169.0333 | 71870000 | 0.0004 | 0.3833 | 0.0002 | 0.3084 | 0.0003 | 0.3084 | 0.0002 | 0 |
| NON-RESIDENTIAL | 18432 | 1806000 | 247.5018 | 22477000 | 0.0004 | 0.6784 | 0.0002 | 0.1608 | 0.0003 | 0.1608 | 0.0002 | 0 |
| | 907 | 381000 | 564.6906 | 2066000 | 0.0004 | 0.6954 | 0.0002 | 0.1523 | 0.0003 | 0.1523 | 0.0002 | 0 |
| | 303 | 64000 | 259.6966 | 725000 | 0.0004 | 0.7766 | 0.0002 | 0.1117 | 0.0003 | 0.1117 | 0.0002 | 0 |
| | 12351 | 883000 | 194.2453 | 13337000 | 0.0004 | 0.8014 | 0.0002 | 0.0993 | 0.0003 | 0.0993 | 0.0002 | 0 |
| | 4272 | 441000 | 279.6132 | 5324000 | 0.0004 | 0.4643 | 0.0002 | 0.2679 | 0.0003 | 0.2679 | 0.0002 | 0 |
| | 599 | 37000 | 125.6373 | 1025000 | 0.0004 | 0.3806 | 0.0002 | 0.3097 | 0.0003 | 0.3097 | 0.0002 | 0 |

Transportation emissions

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| mode | travel bounds | trips | full distance km | gpc distance km | full co2e tons | gpc co2e tons | year |
|------------|---------------|-----------|------------------|-----------------|----------------|---------------|------|
| AUTOMOBILE | IN-BOUNDARY | 566593570 | 4266269565 | 4266269565 | 1174467.7984 | 1174467.7984 | 2022 |
| AUTOMOBILE | IN-BOUNDARY | 543411490 | 3958715888 | 3958715888 | 1089800.8817 | 1089800.8817 | 2021 |

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| | | | | | | | |
|------------|-------------|-----------|-------------|--------------|--------------|--------------|------|
| AUTOMOBILE | IN-BOUNDARY | 459871813 | 3164602582 | 3164602582 | 871188.2291 | 871188.2291 | 2020 |
| AUTOMOBILE | IN-BOUNDARY | 587064404 | 4806508225 | 4806508225 | 1323190.9158 | 1323190.9158 | 2019 |
| AUTOMOBILE | IN-BOUNDARY | 546471232 | 4931702647 | 4931702647 | 1357655.7984 | 1357655.7984 | 2018 |
| AUTOMOBILE | INBOUND | 153500411 | 5345751892 | 2672875946 | 1471640.1202 | 735820.0601 | 2022 |
| AUTOMOBILE | INBOUND | 146451138 | 5012089177 | 2506044588.5 | 1379785.6069 | 689892.8035 | 2021 |
| AUTOMOBILE | INBOUND | 121977806 | 3891630059 | 1945815029.5 | 1071332.7224 | 535666.3612 | 2020 |
| AUTOMOBILE | INBOUND | 157987163 | 5647900502 | 2823950251 | 1554819.0678 | 777409.5339 | 2019 |
| AUTOMOBILE | INBOUND | 150459505 | 5509021778 | 2754510889 | 1516586.8455 | 758293.4228 | 2018 |
| AUTOMOBILE | OUTBOUND | 153577676 | 5309844691 | 2654922345.5 | 1461755.1725 | 730877.5863 | 2022 |
| AUTOMOBILE | OUTBOUND | 121985239 | 3859297374 | 1929648687 | 1062431.8087 | 531215.9043 | 2020 |
| AUTOMOBILE | OUTBOUND | 158280041 | 5615163768 | 2807581884 | 1545806.9228 | 772903.4614 | 2019 |
| AUTOMOBILE | OUTBOUND | 150701130 | 5483869066 | 2741934533 | 1509662.5178 | 754831.2589 | 2018 |
| AUTOMOBILE | TOTAL | 873671657 | 14921866148 | 9594067856.5 | 4107863.0911 | 2641165.4447 | 2022 |
| AUTOMOBILE | TOTAL | 836418934 | 13952425170 | 8955570529 | 3840984.2186 | 2465392.5502 | 2021 |
| AUTOMOBILE | TOTAL | 703834858 | 10915530015 | 7040066298.5 | 3004952.7602 | 1938070.4946 | 2020 |
| AUTOMOBILE | TOTAL | 903331608 | 16069572495 | 10438040360 | 4423816.9065 | 2873503.9112 | 2019 |
| AUTOMOBILE | TOTAL | 847631867 | 15924593491 | 10428148069 | 4383905.1618 | 2870780.4801 | 2018 |
| BUS | IN-BOUNDARY | 13856716 | 91220252 | 91220252 | 56773.1731 | 56773.1731 | 2022 |
| BUS | IN-BOUNDARY | 10239650 | 69306719 | 69306719 | 43134.7455 | 43134.7455 | 2021 |
| BUS | IN-BOUNDARY | 9823629 | 66861466 | 66861466 | 41612.882 | 41612.882 | 2020 |
| BUS | IN-BOUNDARY | 14671529 | 115361322 | 115361322 | 71797.9633 | 71797.9633 | 2019 |
| BUS | IN-BOUNDARY | 14497996 | 107861410 | 107861410 | 67130.2133 | 67130.2133 | 2018 |

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|---------|-------------|----------|-----------|------------|------------|-------------|------|
| BUS | INBOUND | 2274008 | 26980769 | 13490384.5 | 16792.1469 | 8396.0734 | 2022 |
| BUS | INBOUND | 1725575 | 19261823 | 9630911.5 | 11988.0705 | 5994.0352 | 2021 |
| BUS | INBOUND | 1816513 | 22817873 | 11408936.5 | 14201.2659 | 7100.6329 | 2020 |
| BUS | INBOUND | 3145216 | 54566495 | 27283247.5 | 33960.8036 | 16980.4018 | 2019 |
| BUS | INBOUND | 3066472 | 48428075 | 24214037.5 | 30140.4089 | 15070.2045 | 2018 |
| BUS | OUTBOUND | 2381672 | 28229467 | 14114733.5 | 17569.3049 | 8784.6524 | 2022 |
| BUS | OUTBOUND | 1828346 | 20375828 | 10187914 | 12681.399 | 6340.6995 | 2021 |
| BUS | OUTBOUND | 1933177 | 25054362 | 12527181 | 15593.2 | 7796.6 | 2020 |
| BUS | OUTBOUND | 3428804 | 60839399 | 30419699.5 | 37864.9001 | 18932.4501 | 2019 |
| BUS | OUTBOUND | 3262402 | 55042505 | 27521252.5 | 34257.0687 | 17128.5344 | 2018 |
| BUS | TOTAL | 18512396 | 146430488 | 118825370 | 91134.6248 | 73953.899 | 2022 |
| BUS | TOTAL | 13793571 | 108944370 | 89125544.5 | 67804.215 | 55469.4802 | 2021 |
| BUS | TOTAL | 13573319 | 114733701 | 90797583.5 | 71407.3479 | 56510.1149 | 2020 |
| BUS | TOTAL | 21245549 | 230767216 | 173064269 | 143623.667 | 107710.8151 | 2019 |
| BUS | TOTAL | 20826870 | 211331990 | 159596700 | 131527.691 | 99328.9521 | 2018 |
| CYCLING | IN-BOUNDARY | 4899644 | 21461874 | 21461874 | 0 | 0 | 2022 |
| CYCLING | IN-BOUNDARY | 4692056 | 22037586 | 22037586 | 0 | 0 | 2021 |
| CYCLING | IN-BOUNDARY | 5338674 | 24512499 | 24512499 | 0 | 0 | 2020 |
| CYCLING | IN-BOUNDARY | 5247854 | 16783429 | 16783429 | 0 | 0 | 2019 |
| CYCLING | IN-BOUNDARY | 4474035 | 14918239 | 14918239 | 0 | 0 | 2018 |
| CYCLING | INBOUND | 510925 | 5573795 | 2786897.5 | 0 | 0 | 2022 |
| CYCLING | INBOUND | 443196 | 4991958 | 2495979 | 0 | 0 | 2021 |

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|---------|-------------|----------|-----------|------------|---|---|------|
| CYCLING | INBOUND | 439875 | 4927284 | 2463642 | 0 | 0 | 2020 |
| CYCLING | INBOUND | 537985 | 5729195 | 2864597.5 | 0 | 0 | 2019 |
| CYCLING | OUTBOUND | 513453 | 5607006 | 2803503 | 0 | 0 | 2022 |
| CYCLING | OUTBOUND | 458637 | 5262931 | 2631465.5 | 0 | 0 | 2021 |
| CYCLING | OUTBOUND | 457248 | 5145335 | 2572667.5 | 0 | 0 | 2020 |
| CYCLING | OUTBOUND | 568585 | 6030743 | 3015371.5 | 0 | 0 | 2019 |
| CYCLING | TOTAL | 5924022 | 32642675 | 27052274.5 | 0 | 0 | 2022 |
| CYCLING | TOTAL | 5593889 | 32292475 | 27165030.5 | 0 | 0 | 2021 |
| CYCLING | TOTAL | 6235797 | 34585118 | 29548808.5 | 0 | 0 | 2020 |
| CYCLING | TOTAL | 6354424 | 28543367 | 22663398 | 0 | 0 | 2019 |
| CYCLING | TOTAL | 4474035 | 14918239 | 14918239 | 0 | 0 | 2018 |
| ON FOOT | IN-BOUNDARY | 89947129 | 95007339 | 95007339 | 0 | 0 | 2022 |
| ON FOOT | IN-BOUNDARY | 88275885 | 92615720 | 92615720 | 0 | 0 | 2021 |
| ON FOOT | IN-BOUNDARY | 85468278 | 93827989 | 93827989 | 0 | 0 | 2020 |
| ON FOOT | INBOUND | 4026449 | 6130454 | 3065227 | 0 | 0 | 2019 |
| ON FOOT | INBOUND | 4247469 | 5791037 | 2895518.5 | 0 | 0 | 2018 |
| ON FOOT | OUTBOUND | 2126423 | 2617287 | 1308643.5 | 0 | 0 | 2022 |
| ON FOOT | OUTBOUND | 1966087 | 2513921 | 1256960.5 | 0 | 0 | 2021 |
| ON FOOT | OUTBOUND | 2076271 | 3072059 | 1536029.5 | 0 | 0 | 2020 |
| ON FOOT | OUTBOUND | 4113014 | 7005472 | 3502736 | 0 | 0 | 2019 |
| ON FOOT | OUTBOUND | 4302999 | 6318615 | 3159307.5 | 0 | 0 | 2018 |
| ON FOOT | TOTAL | 94267448 | 100301193 | 97654266 | 0 | 0 | 2022 |
| ON FOOT | TOTAL | 92265097 | 97725337 | 95170528.5 | 0 | 0 | 2021 |
| ON FOOT | TOTAL | 89677420 | 100127682 | 96977835.5 | 0 | 0 | 2020 |

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|---------|-------------|-----------|-----------|-------------|---|---|------|
| ON FOOT | TOTAL | 144577230 | 113794880 | 107226917 | 0 | 0 | 2019 |
| ON FOOT | TOTAL | 143219151 | 109904762 | 103849936 | 0 | 0 | 2018 |
| SUBWAY | IN-BOUNDARY | 3568107 | 36760838 | 36760838 | 0 | 0 | 2018 |
| SUBWAY | INBOUND | 6831010 | 120007070 | 60003535 | 0 | 0 | 2022 |
| SUBWAY | INBOUND | 4425750 | 77339089 | 38669544.5 | 0 | 0 | 2021 |
| SUBWAY | INBOUND | 4422809 | 82773985 | 41386992.5 | 0 | 0 | 2020 |
| SUBWAY | INBOUND | 13258397 | 264195863 | 132097931.5 | 0 | 0 | 2019 |
| SUBWAY | INBOUND | 11321340 | 197928942 | 98964471 | 0 | 0 | 2018 |
| SUBWAY | OUTBOUND | 6783170 | 122662350 | 61331175 | 0 | 0 | 2022 |
| SUBWAY | OUTBOUND | 4325179 | 76720297 | 38360148.5 | 0 | 0 | 2021 |
| SUBWAY | OUTBOUND | 4353839 | 81854187 | 40927093.5 | 0 | 0 | 2020 |
| SUBWAY | OUTBOUND | 13464626 | 271747384 | 135873692 | 0 | 0 | 2019 |
| SUBWAY | OUTBOUND | 11931583 | 210835549 | 105417774.5 | 0 | 0 | 2018 |
| SUBWAY | TOTAL | 13614180 | 242669420 | 121334710 | 0 | 0 | 2022 |
| SUBWAY | TOTAL | 8750929 | 154059386 | 77029693 | 0 | 0 | 2021 |
| SUBWAY | TOTAL | 8776648 | 164628172 | 82314086 | 0 | 0 | 2020 |
| SUBWAY | TOTAL | 26723023 | 535943247 | 267971623.5 | 0 | 0 | 2019 |
| SUBWAY | TOTAL | 26821030 | 445525329 | 241143083.5 | 0 | 0 | 2018 |