# Climate Impact of Driving to School


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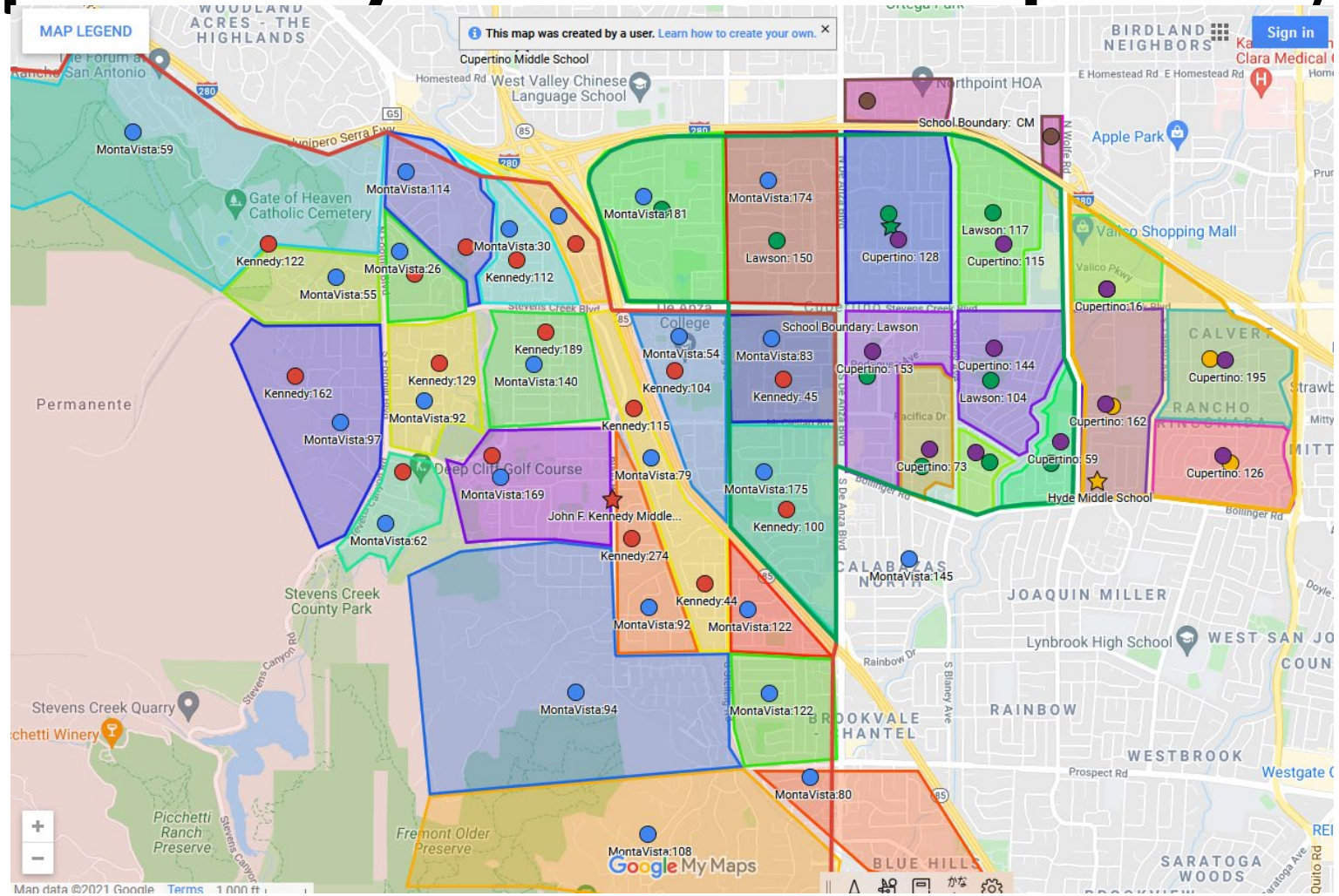
# Climate Impact of Driving to School

- Did you know that 50% of middle and high school students are still driven to school alone in a single car?
- A recent study indicated that these trips consume / generate approximately:
  - 160,000 gallons of gasoline
  - 4,000,000 lbs of Carbon Dioxide!!!
- For Comparison the Average Home in Cupertino emits 16000 lbs in a an entire year!

# Details of the Carbon Impact Estimate

- The analysis is meant for illustrative purposes only
- The inputs were derived from the
  - Walk-Bike Cupertino website
  - Surveys conducted by the Safe Routes to School Organization
  - other public sources
- Methodology:
  - A representative distance to school was selected for each neighborhood
  - Google maps was used to calculate the travel distance and time for a car and bike
  - The number of gallons of gasoline required to drive to and from school was estimated, <u>including time in congested roadways</u>
- The analysis includes an estimate of the % of electric and hybrid vehicles owned by Cupertino residents and % of students driven in a carpool

# Map of Number of Students per HS / MS (map courtesy of Walk Bike Cupertino)




https://walkbikecupertino.org/index.php/maps-data/student-mapping/

# Assumptions / Spreadsheet Example

| Assumptions | | | | | | Results | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Avg Wait (min) | 15 | % Driven to School | 50% | School Days | 180 | allons / Year | 160,372 | Avg yearly emissions per cupertino resident | 8 | ons co2/yr | |
| Auto Mileage / Gal | 22 | % Electric / Hybrid | 14% | % Car Pool | 17% | tons co2/yr | 2,157.00 | Amount due to School Drop Off Only | 0.62 | | |
| CO2 / Gallon (lbs) | 26.9 | Idling Gas (Gal/hr) | 0.7 | # kids in CP | 2 | | | % Reduction Possible | 7.7% | | |
| | | | | # trips / car | 4.0 | | | | | | |

| Neighborhood | Middle School | High School | Total Number of Students | | Number of Students Driven to School | | Number of Students in Carpool | | Dist to MS | Drive Time to | Bike Time to | Dist to HS | Drive Time to | Bike time to | Gallons / Year | tons co2/yr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Middle School | High School | MS | HS | MS | HS | | | | | | | | |
| Greenleaf | Lawson | MontaVista | 150 | 174 | 75.0 | 87.0 | 25.5 | 29.6 | 1.1 | 5 | 6 | 1.3 | 6 | 14 | 26979.7 | 362.88 |
| 3 Oaks | Kennedy | MontaVista | 44 | 122 | 22.0 | 61.0 | 7.5 | 20.7 | 1.8 | 6 | 10 | 1.8 | 6 | 8 | 15442.6 | 207.70 |

*The analysis can easily be adjusted to set an appropriate baseline and track CO2 Emission Reductions*