

Sharing Regional Transportation Emissions Data

Streetlight helped the Twin Cities Metropolitan Council measure individual communities' emissions from passenger and commercial vehicles.

EXECUTIVE SUMMARY

Officials needed to measure emission sources and change over time.

- *Streetlight Data segregated vehicle emission data by jurisdictions and townships.*
- *Emission data findings were shared widely online.*
- *Planners can quantify vehicle emissions and select reduction strategies.*

Mission: Measure Emissions Output

The Metropolitan Council (Council) is the regional policy-making body, planning agency, and provider of essential services for the Twin Cities metropolitan region. The Council knew that climate change is best fought locally, but they lacked jurisdiction-specific data.

To address climate change more effectively, the Council wanted to offer meaningful data to help localities quantify and reduce transportation emissions. To that end, they recently began developing online tools to share emissions data with local governments.

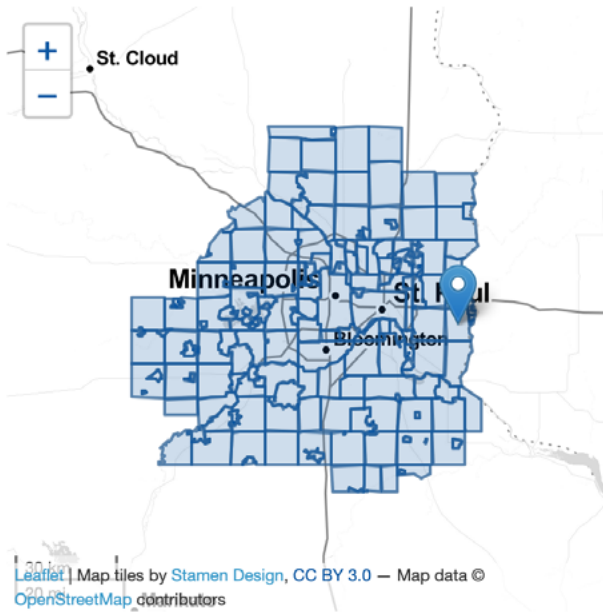
The Council created a study asking a critical question: How can transportation emissions be measured for specific communities and shared with government officials?

"The work will help develop new national standards for climate action planning at the regional level."

ANU RAMASWAMI
Director of the Sustainable
Healthy Cities Network

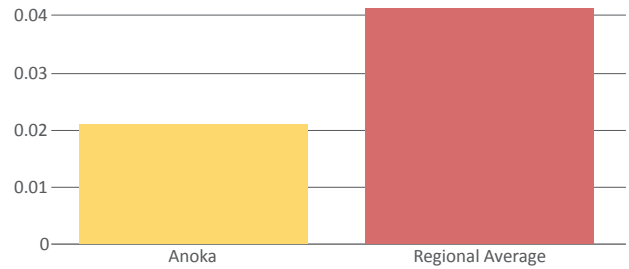


Explore the Twin Cities Greenhouse Gas Inventory

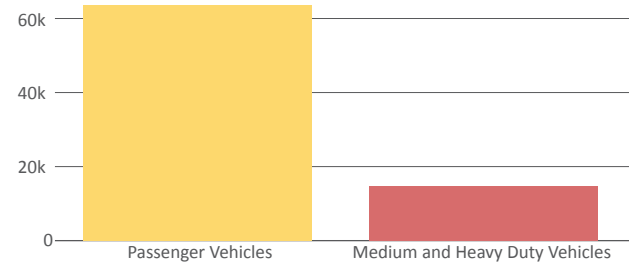


The Twin Cities Metropolitan Council portal invites regional representatives to explore county-by-county emissions data.

GHGs from Metro Transit Service Per Capita (2018)



GHGs from On-road Vehicles in Anoka (2018)



Emissions data for each locality includes area output compared to the regional average, divided into commercial and personal vehicles.

Analysis: Collect Data on Jurisdictional Travel Patterns

Prior to Streetlight's involvement, emissions were being calculated solely based on a community's traffic volume, which was leading to skewed results. For example, emissions were being over-counted in small communities that intersected highways.

This issue was solved by utilizing StreetLight's Origin-Destination analysis, which involved examining the volume of traffic, for both personal and commercial vehicles, going from each city or township unit (CTU) to each CTU during 2018.

VMT was then determined by multiplying the average trip length by each O-D pair. VMT data, in combination with vehicle emissions rates, was then used to calculate transportation emissions. Final results were categorized by CTU, and further broken down by light, medium, and heavy duty vehicles.

Results: Comprehensive Public Data on Emissions

The final analysis provided emissions data for passenger and commercial vehicles in the Twin Cities Metropolitan region, expressed in grams per mile, and sorted by township unit.

The Council made the results publicly available online on the Twin Cities Greenhouse Gas Inventory. This website includes transportation emissions, as well the status of energy, solid waste, wastewater, agriculture, and forest land emissions, for each of the townships located within the Twin Cities metro.

The Council hopes both citizens and decision makers will use this online tool to better understand emission sources, and track how they change over time. The Council is also developing an online scenario-planning tool.