CASE WESTERN RESERVE UNIVERSITY
School of Medicine

Master of Public Health Program

An Assessment of Cleveland's Anti-Idling Ordinance On Vehicle Idling

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CITY OF CLEVELAND
Mayor Justin M. Bibb
PUBLIC HEALTH

BACKGROUND:

- Vehicle emissions contribute to poor air quality and consist of $PM_{2.5.}$ which can result in multiple adverse health effects.
- Cleveland's Ordinance 431.44 prohibits vehicles from idling for more than 5 minutes in a 60-minute time period.
- The ordinance was amended in 2025 granting Cleveland Department of Public Health enforcement authority and requiring sign installation

POPULATION:

- Drivers visiting Downtown Cleveland parking lots and recreational centers.
- City employee parking lots were prioritiz to assess idling activity prior to planned employee education

METHODS:

- Vehicles idling for over 5 minutes were recorded along with the vehicle type, duration of idling, weather, and the air quality was measured using a PurpleAir Sensor (Fig. 1)
- A literature review evaluated anti-idling strategies in different states and cities (Table 1)

Figure 1:



Table 1:

ANTI-IDLING STRATGEY AND SIGN COMPARISON CHART

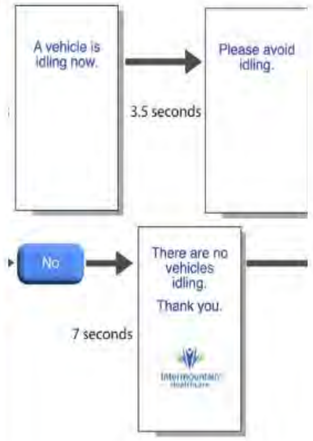
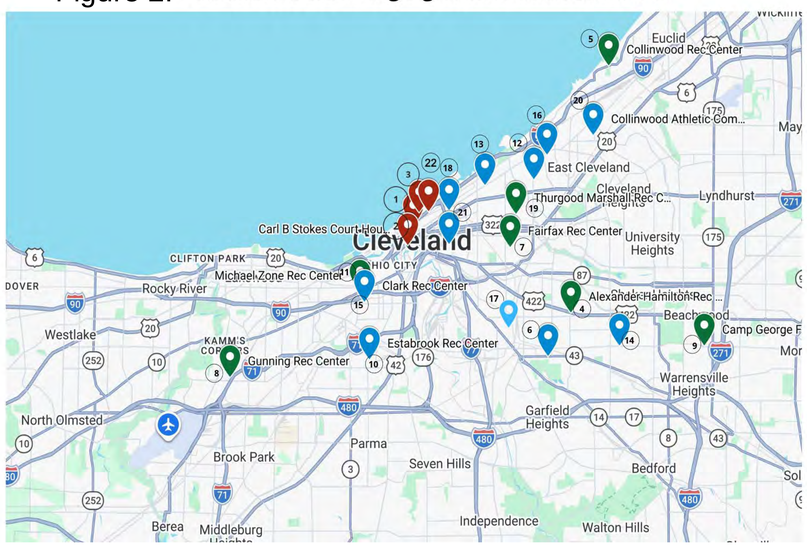
CRITERIA	TARGETED EDUCATION + STATIC SIGNAGE	NO EDUCATION + DYNAMIC SIGNAGE	WIDESPREAD EDUCATION + STATIC SIGNAGE
Requirements	IDLING EDUCATION AIMED AT A SPECIFIC POPULATION (EX. CITY EMPLOYEES) AND SIGN MESSAGING THAT DOES NOT CHANGE.	NO IDLING EDUCATION PROVIDED AND SIGN MESSAGING THAT CHANGES IN REAL TIME BASED ON MEASURED AIR QUALITY.	IDLING EDUCATION AIMED AT GENERAL PUBLIC (EX. STUDENTS, PARENTS, AND BUS DRIVERS) AND SIGN MESSAGING THAT DOES NOT CHANGE.
Effectiveness	MODERATE	HIGH	HIGH
Timeliness	HIGH	MODERATE	LOW
Feasibility	HIGH	LOW	LOW
Anti-Idling Sign Example			

Figure 2: **Cleveland Anti-Idling Sign Installation Locations**



Key:
Blue- Sign Installation Location

Green- Sign Installation Location + Observed Location

Red-Priority Sign Installation Location + Observed Location

Locations:

1. Willard Park Garage
2. Carl B Stokes Courthouse
3. Burke Lakefront Airport (BKL)
4. Alexander Hamilton Rec Center
5. Collinwood Rec Center
6. Earle B Turner Rec Center
7. Fairfax Rec Center
8. Gunning Rec Center
9. Camp George Forbes Rec Center
10. Estabook Rec Center
11. Micheal Zone Rec Center
12. Cory Rec Center
13. EJ Kovacic Rec Center
14. JFK Rec Center
15. Clark Rec Center
16. Glenville Rec Center
17. Lonnie Burton Rec Center
18. Sterling Rec Center
19. Thurgood Marshall Rec Center
20. Collinwood Athletic Complex
21. Cleveland Central Rec Center
22. Lakefront Municipal Parking Lot

RESULTS

- The maximum recorded $PM_{2.5}$ value was 64.03. An amount considered unhealthy, where the general public may feel effects.
- Out of the observed 2,680 minutes, cars on average idled for 10.40 minutes.

LIMITATIONS:

- Due to heat advisories and smoke advisories observations were interrupted.
- When observations began in July, not every location had a sign installed. Resulting in different observational periods for some locations.

PUBLIC HEALTH IMPLICATIONS:

- Understanding driver behaviors concerning idling can increase the effectiveness of an implemented strategy aimed at reducing vehicle emissions.

DELIVERABLES:

1. A policy brief assessing the implementation of various anti-idling strategies (Table 1).
2. A map showing current anti-idling sign locations (Fig. 2).

NEXT STEP RECOMMENDATIONS:

- Continue observations at identified locations to further examine the effect of this anti-idling strategy.
- Increase the number of installed static signage at the current installation locations.

ACKNOWLEDGEMENTS:

Thank you to (Cleveland Air Quality Division Team) Christina Yoka, Priya Govender, Clara McGuan. Dr. Maeve MacMurdo, and my classmate Pedro Canas.