Love My Air

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Director, Air Pollution Control Division

2/14/2023

Agenda

- Air quality issues
- Why air monitoring?
- Why the Love My Air program?
- LMA's solutions
- Future of Love My Air
  - Denver and beyond
  - Environmental Justice & Disproportionately Impacted Communities

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Air Quality Issues

- EPA downgrade of the Denver Metro North Front Range ozone nonattainment region from Serious to Severe status

- Primary sources of pollution on the Front Range
    - Mobile sources - cars, trucks, buses, planes, trains, etc.
    - Stationary sources - oil & gas, power utilities, manufacturing, construction, landfills, agriculture, mining, retail
    - Wildfires

- Health implications:
    - Asthma
    - Lung and heart disease
    - Preterm births and low birth weight

- Children and disproportionately impacted communities are more susceptible to worsening air quality

American Lung Association. (2021). State of the Air 2022
United States Census Bureau. (2019). Estimates of Resident Population Change and Rankings: July 1, 2017 to July 1, 2018 - United States -- Metropolitan Statistical Area; & for Puerto Rico.
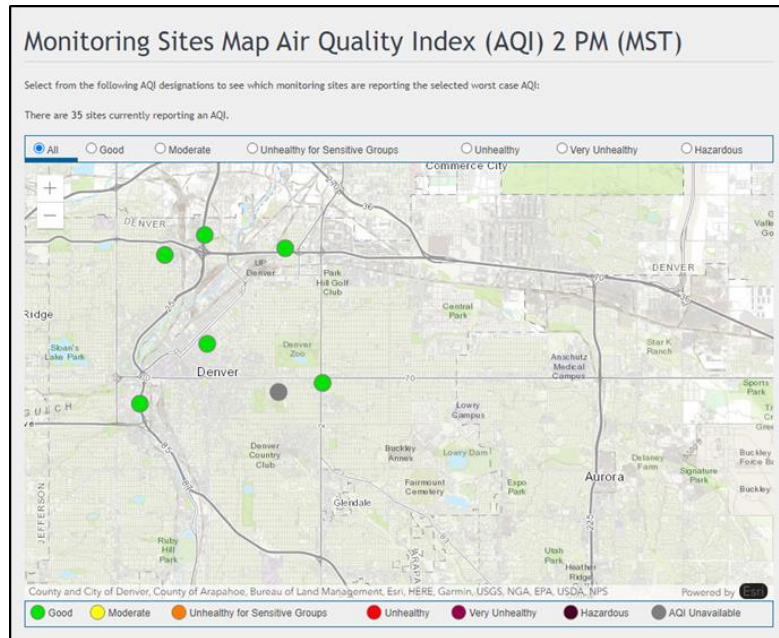
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Why air monitoring?

- Lack of real-time air quality monitoring and data used in schools
- No prior existing sensor network or outreach in communities
- Only regional monitoring that was not accessible (ADA, bilingual, easy to find)
  - 5 out of 6 existing monitors located along highways
  - Air Quality Index only calculated hourly and hard-to-find

Opportunities to create educational air quality programming in Denver Public Schools and surrounding communities

State air monitoring network: showcases how few areas are covered by the monitors
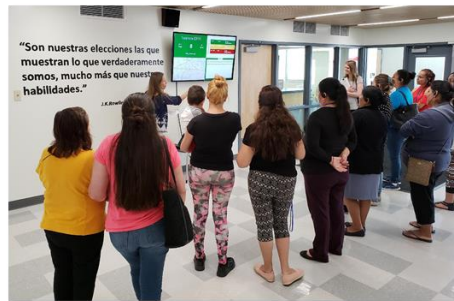

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Why the Love My Air program?

- In 2018, Denver's Department of Public Health & Environment (DDPHE) founded the Love My Air Program (LMA)

- Funded by a $1 million 2018 Bloomberg Mayors Challenge grant awarded to the city

- LMA in partnership with 36 Denver Public Schools (DPS) has created a citywide air quality monitoring network

- LMA's goals are to provide education to:
    - reduce air pollution;
    - limit exposure through behavior change;
    - promote community engagement;
    - allow Denver residents to make informed decisions for their health

Mayor Hancock and DPS Superintendent Suzanne Cordova touring monitor installations
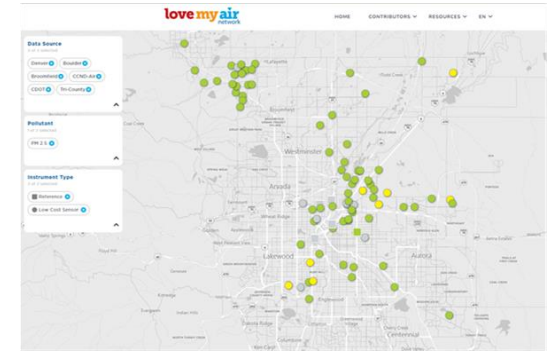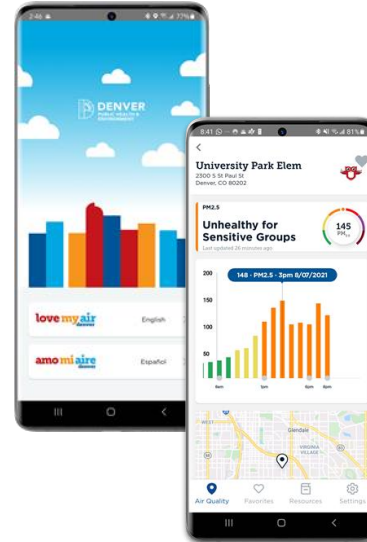

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Love My Air's Solutions

- DDPHE began reaching out to schools based on reduced lunch rates and asthma rates
- First community-based air sensor network led by a city
  - Provides real-time AQ data utilizing low-cost sensors
  - Monitor PM 2.5 - long term health effects for children
  - Air quality dashboards
    - Online & centrally located TV screen within participating schools
- Love My Air app
  - Real-time & historical data
  - Air Quality Index (AQI)
  - Health-based guidance
  - Push-notifications & behavior changes
- Public health toolkit for nurses
- Anti-idling awareness

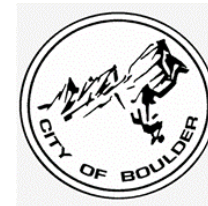Community meetings developing dashboard designs

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Replication & Partnerships

- Replication in other municipalities
  - Several local agencies are (or will be) using the Love My Air App, brand/logo, and educational materials to promote their own Love My Air programs or bring awareness of air quality
- EPA's ARP Enhanced Air Quality Monitoring Grant
  - 2023 EPA funding for community air monitoring has created many opportunities nationally for local governments to adopt Love My Air
- Relationships with Denver Museum of Nature and Science
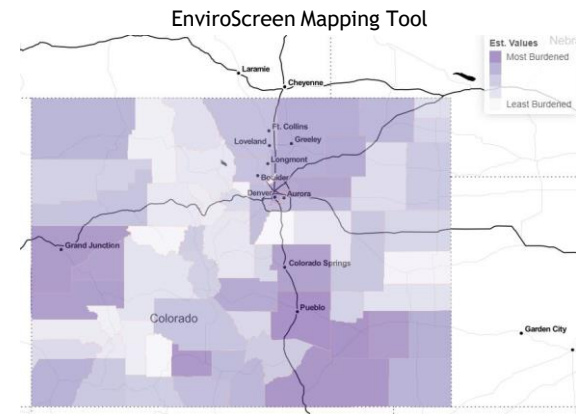- Partnership with 2B Technologies

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Future of Love My Air & Community Monitoring

- Love My Air replication in Colorado
  - Focus on empowering Environmental Justice (EJ) and Disproportionately Impacted (DI) communities through data and information
  - Resources to be distributed to communities identified as highly burdened through the use of **EnviroScreen** tool developed by CDPHE's Environmental Justice Unit
  - Cumulative burden analysis based on 37 environmental, health and demographic indicators
  - Building a new team at the Air Pollution Control Division to provide resources and expertise to implement an air monitoring network
- Goal is to provide residents the knowledge and resources to advocate for policy to mitigate air pollution within their communities

cdphe.colorado.gov/enviroscreen

EnviroScreen Mapping Tool

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