

DIESEL EXHAUST EXPOSURE IN SOUTH SEATTLE

**A Community
Engagement
Study**

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DIESEL EXHAUST EXPOSURE IN THE DUWAMISH STUDY (DEEDS)

Project goals:

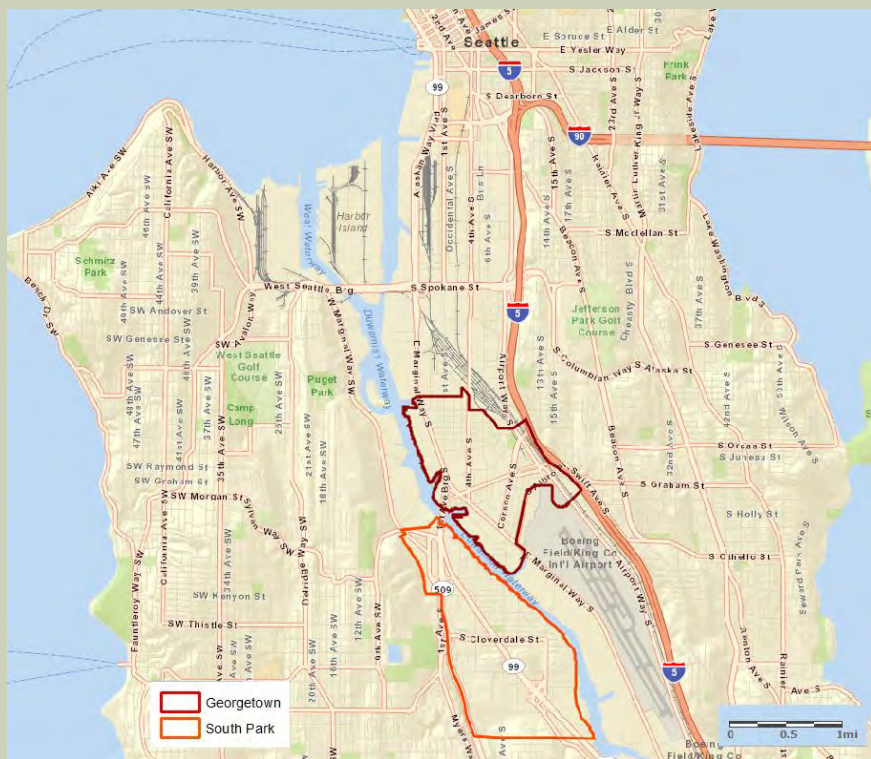
- Assess diesel exhaust concentrations within the neighborhoods of South Park and Georgetown
- Engage community members in the design of research priorities and methods
- Use research findings to advocate for better air quality in marginalized neighborhoods



SCHOOL OF PUBLIC HEALTH
UNIVERSITY *of* WASHINGTON

SOUTH SEATTLE OVERVIEW

South Park and Georgetown



Source: ArcGIS Explorer, Open Street Map

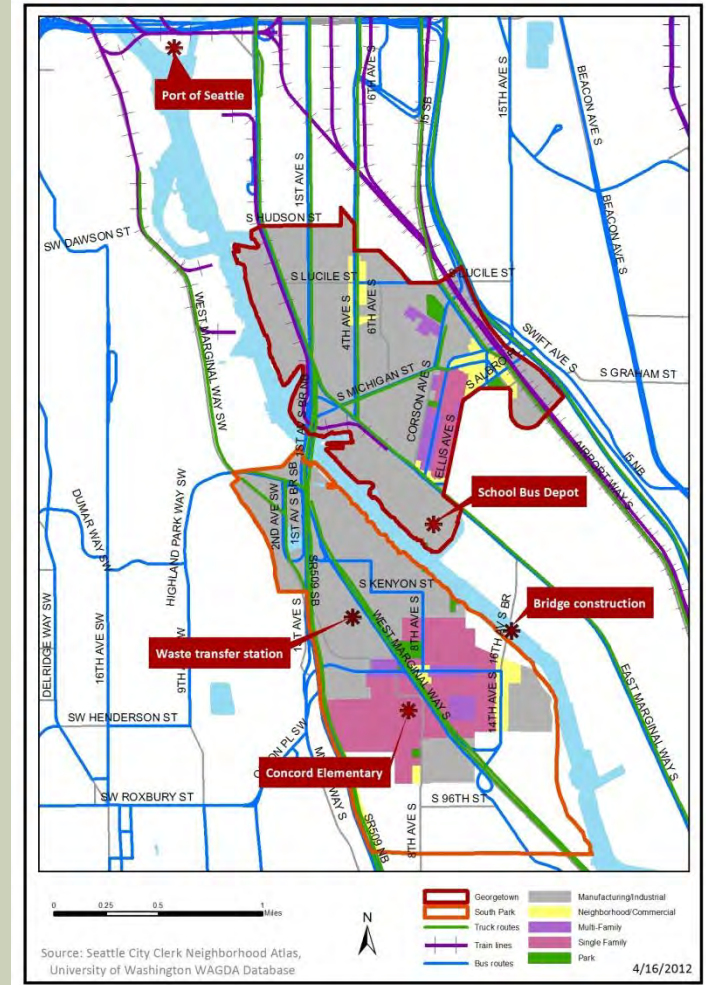


Source: <http://sdotblog.seattle.gov/>

- ~2.75 square miles
- ~5200 residents
- Demographics relative to Seattle:
 - Lower median household income
 - More residents of color

SOUTH SEATTLE OVERVIEW

- High volume of diesel exhaust sources
 - Public buses
 - Trains
 - Trucks
 - Port of Seattle
 - Waste transfer station
 - School bus depot
- Associated health effects
 - Highest asthma hospitalization rate in King County



OUTREACH STRATEGY

- Door-knocking at residences and businesses
- 2 community surveys
 - Over 300 responses each
- 2 community-wide meetings
- 1 community advisory board meeting
- 1 Vietnamese community dinner
- Latino community outreach
- Community events
 - Food banks
 - Senior dinners
 - Neighborhood meetings
 - PTA meetings



Photo credit: Sarah Moran, Puget Sound Sage

DIESEL EXHAUST 101

- 38 community members
- Local agencies and organizations



Photo credit: Elizabeth Sharpe, UW

Diesel Exhaust 101

Save the Date!

6:30 pm, Thursday, March 1
Georgetown Campus,
South Seattle Community College
6737 Corson Avenue South

Ask questions about diesel pollution and how it impacts you. Experts will be on hand to answer questions and share information.

FREE food and family activities. Interpretation provided in Spanish and Vietnamese.

April 12
Diesel
Prioritization
Meeting

May 17
Diesel
Monitoring
Selection

Asthma & Health Fair

6:30 pm, Thursday, March 1
Georgetown Campus,
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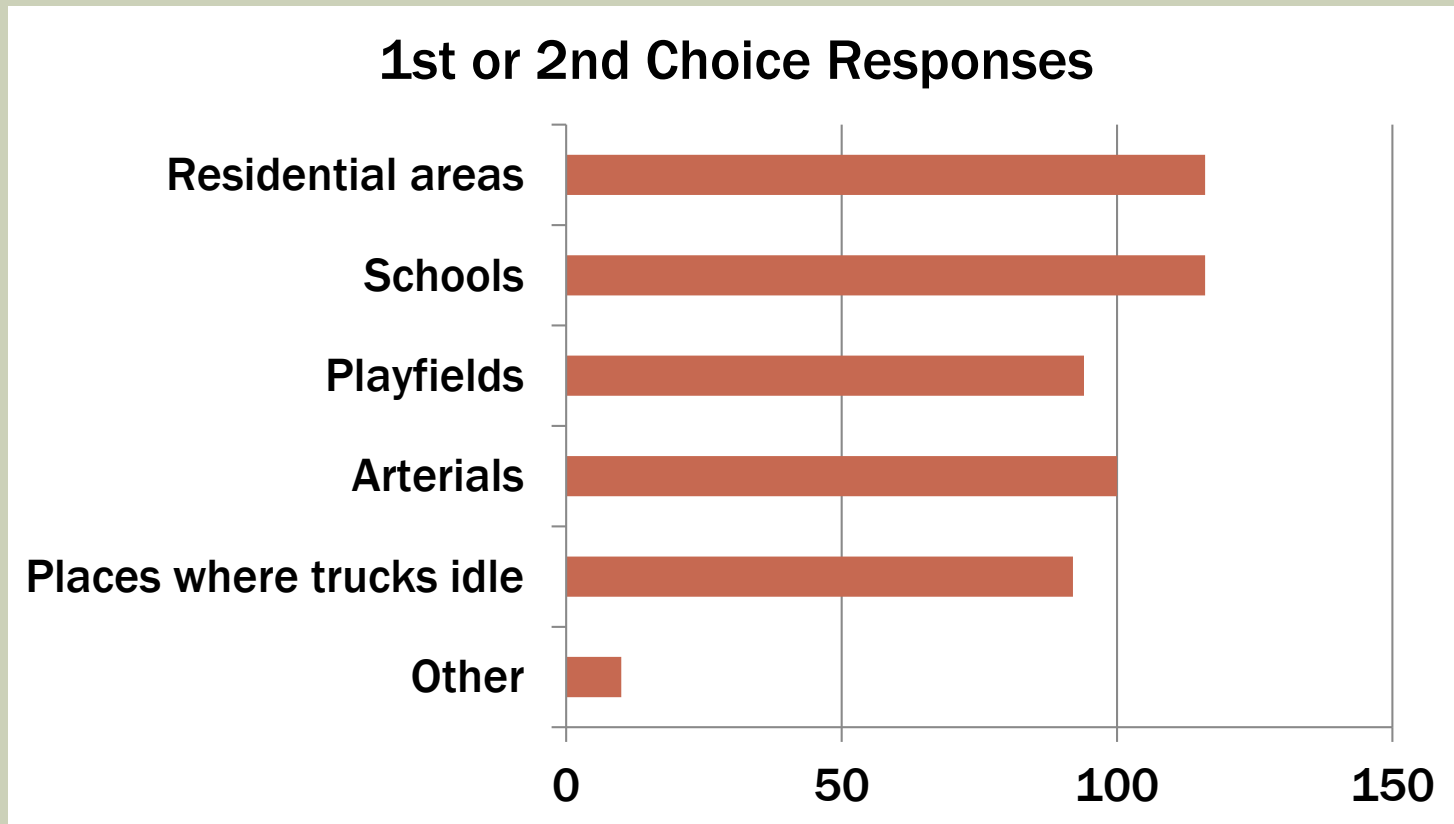
Learn how diesel exhaust could be impacting your health. Tools to protect your health now will be available. Build a lung out of household items and do a lung function practice test.

**FREE HEALTH INFORMATION,
ACTIVITIES AND RESOURCES FOR
CHILDREN AND ADULTS**



COMMUNITY SURVEY

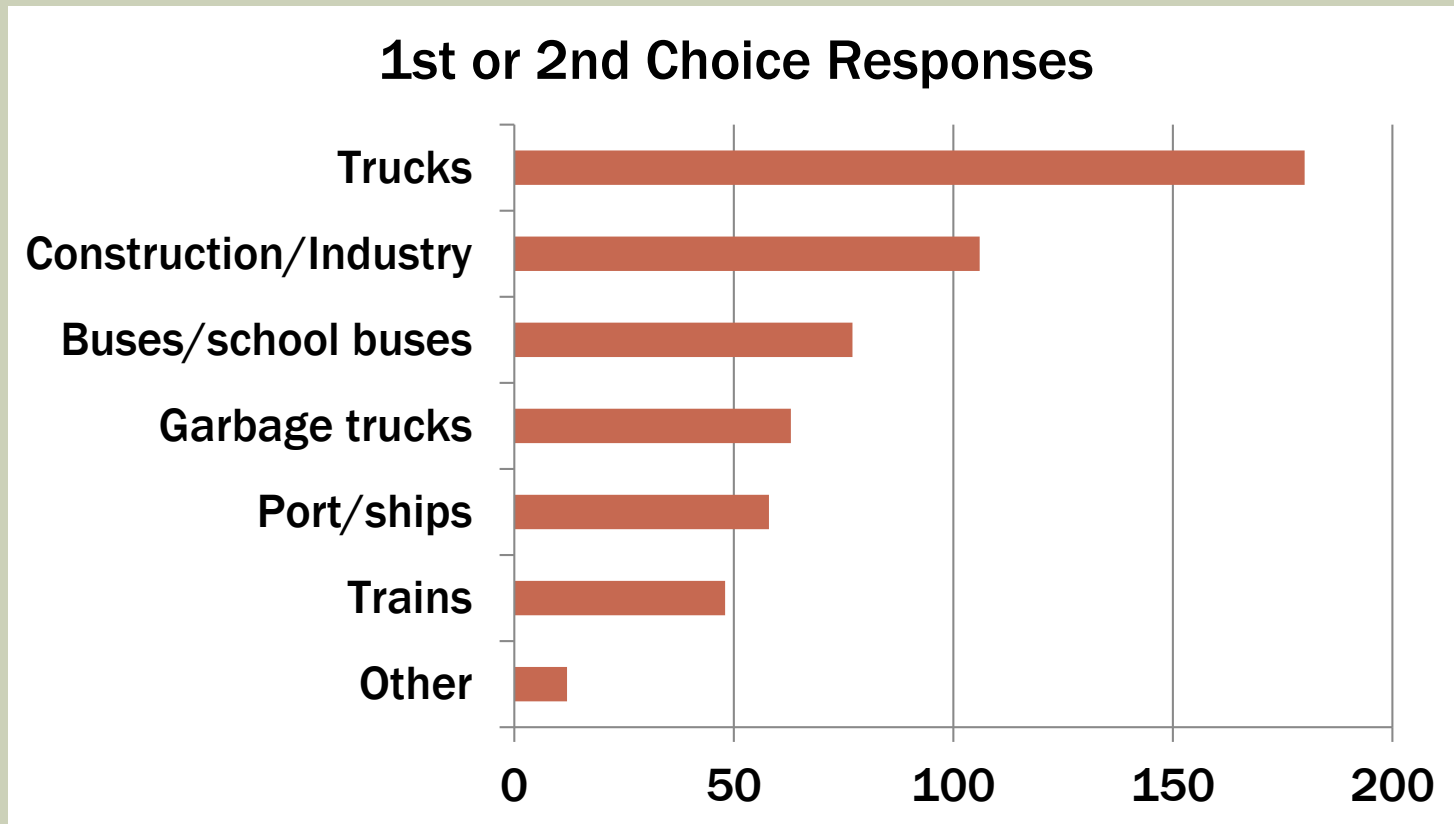
What kind of places would you like to monitor?



“Other” category included: Duwamish water way (n=1) and First Student Bus Routes (n=1)

COMMUNITY SURVEY

Which diesel exhaust sources are your biggest concern?



SAMPLING STRATEGY OPTIONS

- Passive sampling



Photo credit: UW

- Active sampling



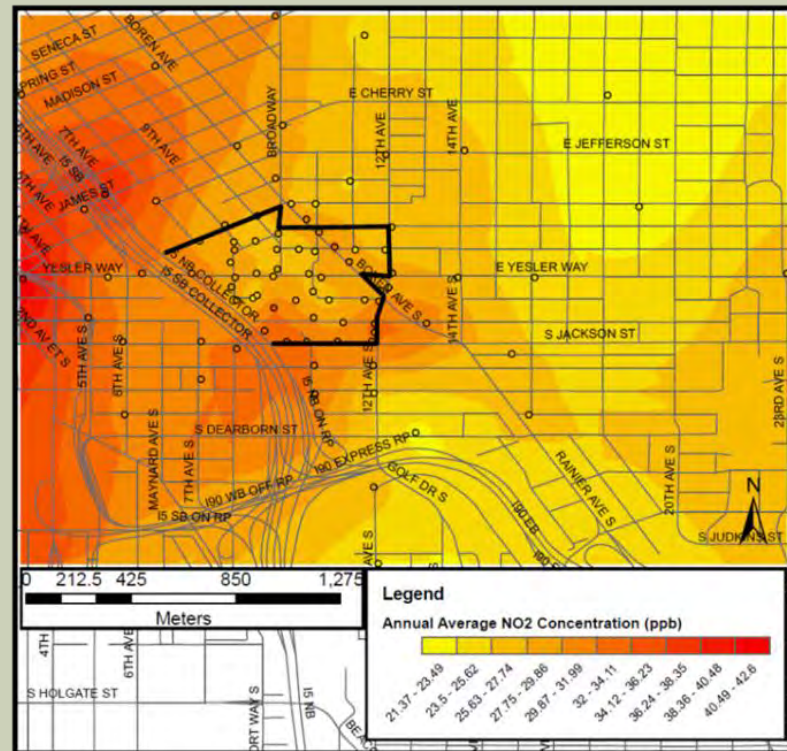
Photo credit: UW

- Traffic counting



Photo source: <http://www.tra-inc.com/Employment.html>

Sample map of modeled NO_x gradient



Source: Master's thesis, Stephanie Wong, UW

SUCCESS SO FAR

- Valuable input from community members
- Broad range of perspectives among participants
- Support from local health and environmental agencies



Photo credit: Elizabeth Sharpe, UW

CHALLENGES

- Balance between data-driven research and community advocacy
- Participation fatigue among residents
- Short timeline
- Concerns outside the scope of our project

DEEDS AIR SAMPLING
FIELD LOG

START DATE: _____

LOCATION: GEORGETOWN

OTHER: _____

END DATE: _____

ANALYZER:

- PDR (particulates PM_{2.5})
- MIE PDR (PM_{2.5} engine)

MEASUREMENTS:

Time (hrs)	Target PPM	Reservoir Target	Sample ID	Zeroed?	Time On	Time Off
2 hrs	10 LPM	RM10 SV				
1 hr	7 LPM	RM7 SV				
1 hr	RM5 LN					

THANK YOU

Please contact me with questions or suggestions. Thank you.

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www.duwamishdiesel.org

DIESEL EXHAUST EXPOSURE IN THE DUWAMISH STUDY (DEEDS)

EASY ACTIONS

Get involved and learn more about diesel exhaust.

BUILD KNOWLEDGE

Help identify diesel exhaust concentrations in South Park and Georgetown.

POWERFUL CLEAN AIR OUTCOMES

Have a voice in how the study measures and monitors diesel exhaust.