



# 2014 National Training Conference on the Toxics Release Inventory and Environmental Conditions in Communities

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DREXEL UNIVERSITY  
School of  
Public Health

# ERASING THE REFINERY: INDUSTRY AND AIR POLLUTION AS HIDDEN URBAN STRESSORS

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# OUTLINE FOR TODAY

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**Acknowledgements**

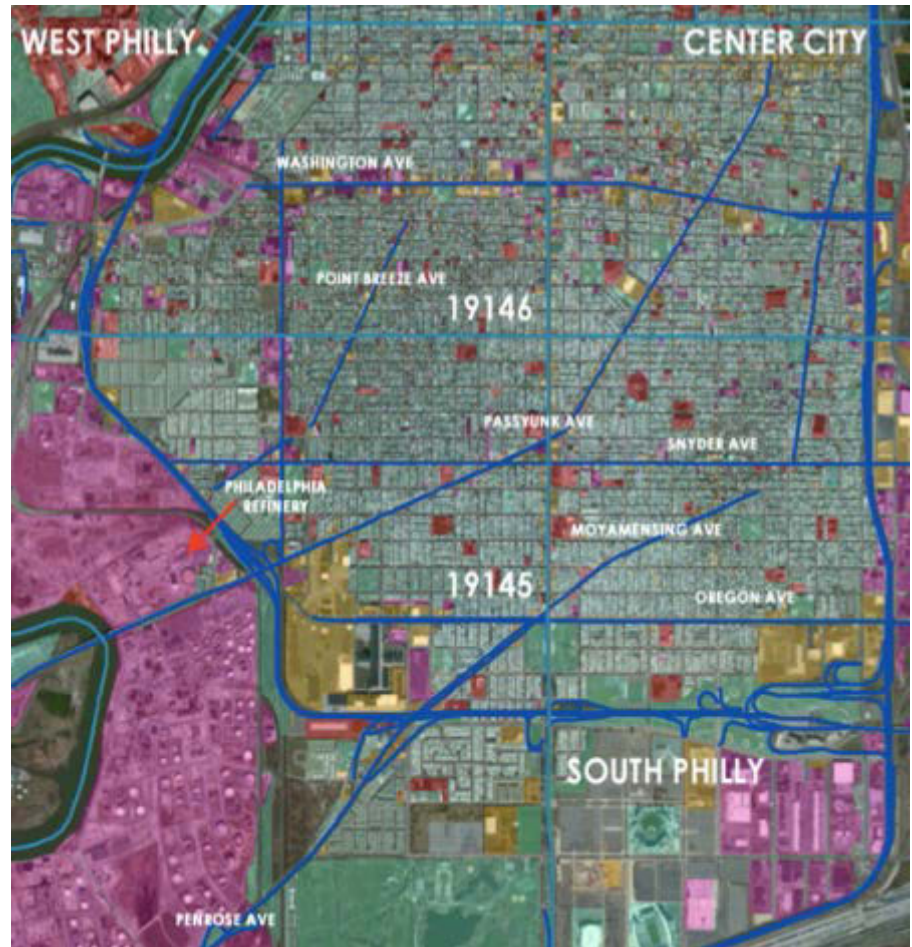
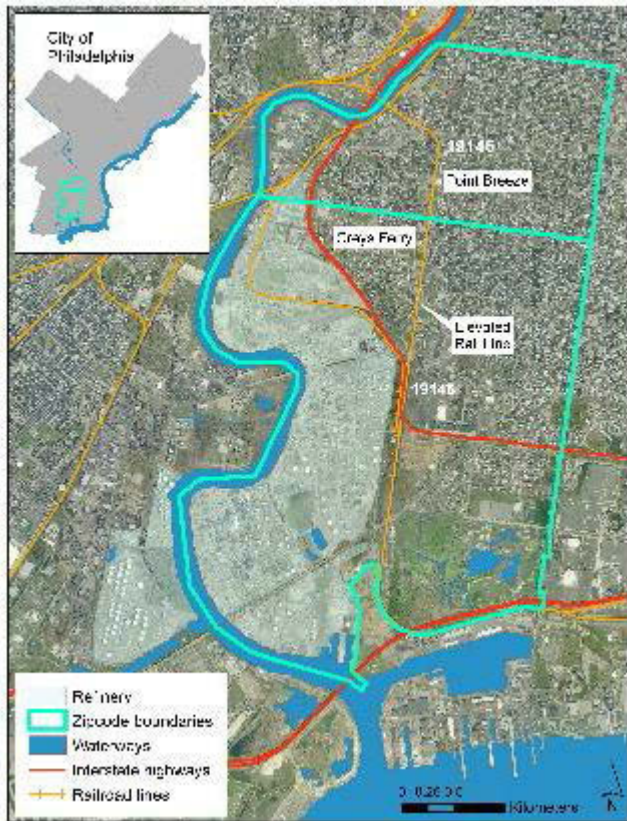
**Journal article reference**



# INTRODUCTION AND BACKGROUND

- Point Breeze and Grey's Ferry lie next to an oil refinery along with other industrial sites.
  - Residents have been experiencing disproportionate exposure to environmental health hazards for decades.
  - Communities in the South Philadelphia West neighborhood have long been concerned about the possible impacts of residents' and workers exposed to hazardous air pollutants (HAPs) from several of the industrial sites, specifically the oil refinery also located in this area.
  - 45,000 residents live within 1.6 km from the refinery, 59% were black, 29% white, 8% Asian and 4% Latino. Thirty-two % live below the federal poverty level
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# Overview Maps Showing Philadelphia Refinery and the Greys Ferry & Point Breeze Neighborhoods



## BACKGROUND (CONTINUED)

- A successful method of obtaining an accurate portrayal of a community's views, beliefs, and perceptions is through the use of focus groups.
- This presentation details the process and outcomes of collaborative research conducted by a team of individuals representing the neighborhoods of Point Breeze and Greys Ferry in Philadelphia, PA (USA), two universities and EPA.

# AIMS OF THE STUDY

The purpose of this project was to facilitate multiple focus groups in different neighborhood settings throughout the South Philadelphia West community to shed light on what the residents perceived as concept of place on risk perception and community stress from environmental hazards in the neighborhood.

# METHODOLOGY

## Initializing Focus Groups

- Mobilization meetings held between environmental scientists and community contacts
- Determined the best locations to hold focus groups
- Established relationships with community institutions (churches, recreation centers, schools)

## Recruiting for Focus Groups


- For recreation centers: advertised via flyers, word of mouth, and social media
- For churches: advertised via church bulletins and flyers
- Advertised incentives: free meal and 10\$ Shoprite gift card
- Requirement for participants: 18 y/o +, reside in zip codes: 19145 or 19146

*This project received IRB approval from University of Pennsylvania as well as US EPA, HSRRO prior to the start of the research.*




# METHODOLOGY (CONTINUED)

## Preparing for Focus Groups

- Gathered necessary materials: maps, audio and video recorder, pens, markers, food, gift cards
  - Arranged tables and chairs in circle to promote productive discussion
  - Set up video camera in corner of room and audio on each edge of table
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# METHODOLOGY (CONTINUED)

## Conducting the Focus Groups:

- Lunch or dinner for participants
  - Participants completed documents: consent form and contact/info sheet and created name tags
  - Map exercise
  - Discussion questions
  - Wrap up and distribution of gift cards
  - Audio and video recording during focus group
  - Notes taken before, during, and after focus group
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# MATERIALS FOR FOCUS GROUPS

Draw a \* at/near your house  
(what's the closest street corner?)

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Draw an **OUTLINE** around  
your neighborhood

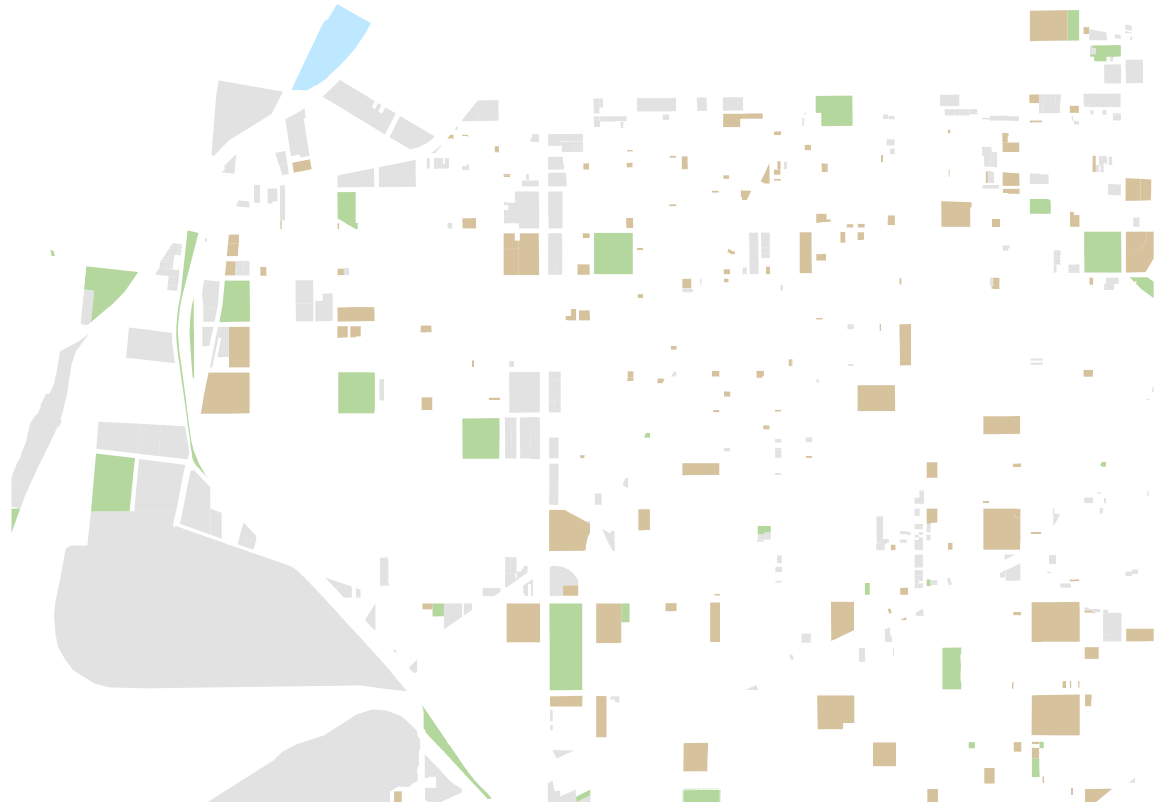
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Draw a **O** for each positive place

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Draw an **X** for each negative place

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# FOCUS GROUP QUESTIONS

**Focus groups lasted 60 to 90 minutes and covered the following questions:**

What do you consider to be your neighborhood?

What do like and dislike about your neighborhood?

How does your neighborhood support / harm your health?

Are you concerned about pollution in the neighborhood?

(If air pollution is not discussed) How about air pollution?

What are the sources of pollution here?

(If the refinery is not discussed) What are your thoughts on the refinery?

What are the main health issues in your neighborhood?

Has a physician treated you or any member of your family for asthma?

# FOCUS GROUPS DESCRIPTION

Sessions lasted approximately

1-1.5 hours each

**Total Participants: 56**

## Vare Recreation Center

- 5 focus groups
- 30 total participants
- Predominately African American females, 60 y/o +

## Zion A.M.E. Church

- 1 focus group
- 18 total participants (separated into 2 groups)
- Predominately African American females, 60 y/o +

## St. Thomas Aquinas Church Center

- 1 focus group
- 8 total participants
- Predominately Caucasian females, 75 y/o +

# RESULTS

- The major themes on which we report –
  - residents' perceptions of the refinery,
  - industry,
  - air pollution, and
  - environmental health –were derived from this iterative process of reports, memos and discussions.
- Offers an in-depth look using qualitative data in two neighborhoods in Philadelphia.
- Although participants were not randomly selected and their statements should not be seen to represent community-wide sentiment.



# RESULTS

## Patterns:

- Environmental health hazards: inadequate waste management, air pollution, sewage issues, various odors
- Common environmental health-related conditions: asthma, breast cancer, allergies, and skin issues

## Comments such as from participants:

"We're so used to it [pollution], we don't even recognize it anymore"

# TABLE 2. ENVIRONMENTAL CONCERNS

| <b>Theme</b>           | <b>Initiated Comment</b> | <b>Indicated Agreement</b> | <b>Provided Example</b> | <b>Disagreed</b> |
|------------------------|--------------------------|----------------------------|-------------------------|------------------|
| SOCIAL/CULTURAL ISSUES | 25                       | 13                         | 19                      | 1                |
| TRASH                  | 19                       | 11                         | 11                      | 4                |
| INADEQUATE SERVICES    | 17                       | 10                         | 14                      | 0                |
| POLLUTION & SMELLS     | 17                       | 9                          | 4                       | 0                |
| BUILT ENVIRONMENT      | 13                       | 7                          | 6                       | 2                |



# CONCLUSIONS

- It may be possible to reduce impacts of pollution through mitigation of other related social and physical stressors.
- For example, place-based programs to improve environments, such as cleaning and greening of vacant lots, improving housing or solid waste management could reduce vulnerability to effects of air pollution exposure.
- Efforts to monitor pollution and exposure levels, document environmental injustice, and organize action, must be sensitive to power dynamics and fears that go along with neighborhood research and improvement.
- Collaborative efforts must seek and provide funding for outreach and education about local air quality with and among neighborhood residents.

# ACKNOWLEDGEMENTS

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However, the views expressed in this article are those of the co-authors, and do not necessarily reflect the official views of EPA or the U.S. government.



# JOURNAL ARTICLE REFERENCE

Michelle C. Kondo, Carol Ann Gross-Davis, Katlyn May, Lauren O. Davis, Tyiesha Johnson, Mable Mallard, Alice Gabbadon, Claudia Sherrod, Charles C. Branas, Place-based stressors associated with industry and air pollution, *Health & Place*, Volume 28, July 2014, Pages 31-37, ISSN 1353-8292,