

# Building Community Capacity Thru Training and Collaboration

Presentation to

*American Public Health Association*

*Strategies To Build Community Capacity To Engage In The  
Environmental Health Research Process*

November 5, 2007

*Peggy M. Shepard*

*WE ACT For Environmental Justice*

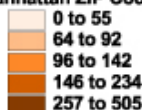
# A Profile of WE ACT Based In Northern MANHATTAN

- 7.4 sq. miles, over 600,000 people
- 86% African-American and Latino
- \$16,000 median household income
- Excess mortality: asthma, cancer heart disease, high rate of obesity, diabetes, learning disabilities.
- Multiple environmental exposures
- Non-attainment area for clean air standards.
- Ranked #1 in Cancer Risk from Air Toxics by EPA
- Highest asthma rates in nation

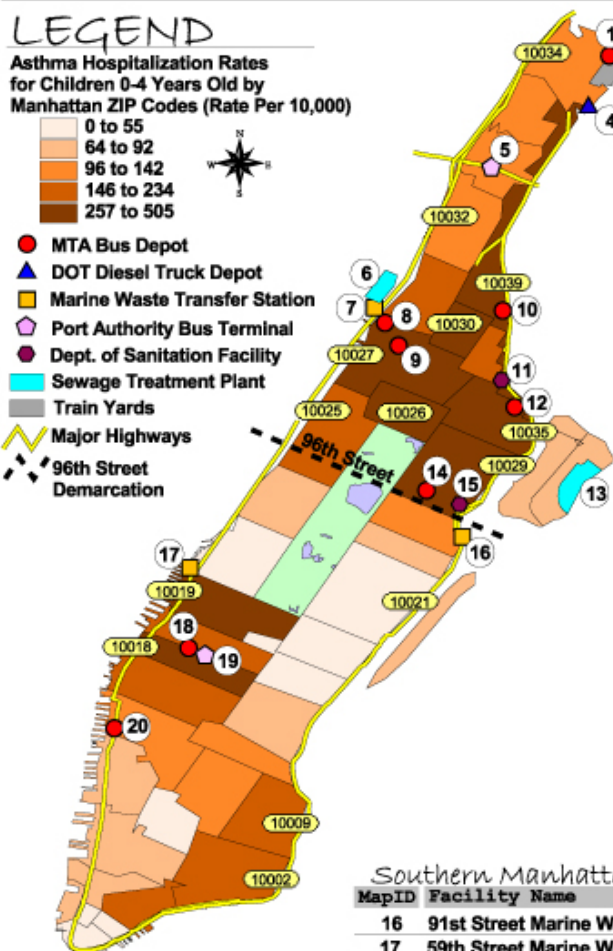
# Asthma Hospitalizations Rates by ZIP Code Children Aged 0-4, Manhattan, 2000

## LEGEND

Asthma Hospitalization Rates  
for Children 0-4 Years Old by  
Manhattan ZIP Codes (Rate Per 10,000)



- MTA Bus Depot
- ▲ DOT Diesel Truck Depot
- Marine Waste Transfer Station
- ◆ Port Authority Bus Terminal
- Dept. of Sanitation Facility
- Sewage Treatment Plant
- Train Yards
- Major Highways
- 96th Street Demarcation



### Average Pediatric Asthma Rates:

- Northern Manhattan: 245 Per 10,000 Children
- New York City: 177 Per 10,000 Children
- Manhattan: 173 Per 10,000 Children

### Northern Manhattan Facilities

MapID	Facility Name
1	Kingsbridge MTA Bus Depot
2*	DOS Garbage Truck Depot (Two Large Depots, One Services Residents of the Upper East Side)
3	MTA Train Yards
4	Department of Transportation / Division of Highways Diesel Truck Depot
5	George Washington Bridge Port Authority Bus Terminal
6	North River Sewage Treatment Plant / Riverbank State Park
7	135th Street Marine Waste Transfer Station
8	Manhattanville MTA Bus Depot
9	Amsterdam MTA Bus Depot
10	Mother Clara Hale MTA Bus Depot (Scheduled to Expand)
11	DOS Garbage Truck Depot
12	126th Street MTA Bus Depot
13	Wards Island Sewage Treatment Plant
14	100th Street Bus Depot (Currently Expanding)
15	DOS Garbage Truck Parking Lot (Out Door Parking Lot)

### Southern Manhattan Facilities

MapID	Facility Name
16	91st Street Marine Waste Transfer Station
17	59th Street Marine Waste Transfer Station
18	41st Street MTA Bus Depot
19	42nd Street Port Authority Bus Terminal
20	Hudson MTA Bus Depot (Scheduled to Close)

Source: NYC Department of Health SPARCS 2000 data on Asthma Admission Rates for children ages 0 to 4 years.

Map prepared by West Harlem Environmental Action, Inc. (WE ACT) with the Columbia Center for Children's Environmental Health (CCCEH), using ESRI ArcView® GIS v3.1.1. If you have any questions or concerns, please contact the WEACT GIS Mapping Specialist, Carlos M. Jusino, at (212) 961-1000, ext. 307.

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February 18, 2003  
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# Environmental Racism & Justice

- Millions of people of color live and work in polluted environments and bear the brunt of the nation's pollution problems.
- Exposures, health risks are greater.
- Numerous studies indicate that race is the prime predictor of where toxic waste sites are located; income secondarily.
- Right of all to be protected from environmental degradation.

# WE ACT FOR ENVIRONMENTAL JUSTICE

- WE ACT builds community power that improves environmental health, policy and protection in communities of color and low-income communities.
- Emerged in 1988 out of community struggles re: North River sewage treatment plant and diesel pollution.
- Programs: Environmental Health and CBPR, Government Accountability, Youth Leadership Development, Community Organizing and Education, Sustainable Development.
- Part of national, global EJ Movement

# Environmental Health

P E R S P E C T I V E S

Journal of the National Institute of  
Environmental Health Sciences

October 2000

VOLUME 108 | NUMBER 10

PAGES A431-A482 & 915-1006

**China's Environmental  
Health Challenge**

**Do Genes Predispose  
You to Lead Poisoning**

**More Health Risks  
from Phthalates**

# Environmental Justice Focus on Science

- Realized that evidence-based campaigns moved policymakers, empowered residents.
- Important tool and dynamic-- science and technology.
- Has great impact on our ability to develop safe, sustainable communities.
- Lack of scientific literacy, information, data, and context was serious void contributing to systemic exclusion of communities of color from decision-making.
- Demanded health studies to assess environmental exposures or residents living in polluted areas.

# COMMUNITY-BASED PARTICIPATORY RESEARCH

- Research findings communicated to broader community—so they can effect needed changes in environmental and health policy to improve existing conditions.
- CBPR seeks to build capacity and resources in communities, and to ensure that government agencies and academic institutions better understand and incorporate community concerns into their research agendas.
- Collaborative, co-learning process that stresses systems development, community capacity building, and balancing research and action (Israel et al, 1998) CBPR has achieved particular prominence in the U.S. in the field of environmental health



# Earth Crew members with traffic counting equipment



*Earth Crew members (from left to right: Carl Willis, David Betancourt, Latanya Stevens and Felicia Reynolds) keep a close watch as they count the number of diesel buses and trucks rolling down the streets of Northern Manhattan.*

# Fostering Community-Academic Partnership

- The partnership between WE ACT and the NIEHS Center at Columbia and the Columbia Children's Center for Environmental Health began in the mid 90s with two goals:
- (1) studying the relationship between community-level environmental exposures and environmental health outcomes and
- (2) translating those findings into policy changes that create equity in environmental decision making and environmental protection.

# Building Partnership and Methods To Engage Academics and Residents

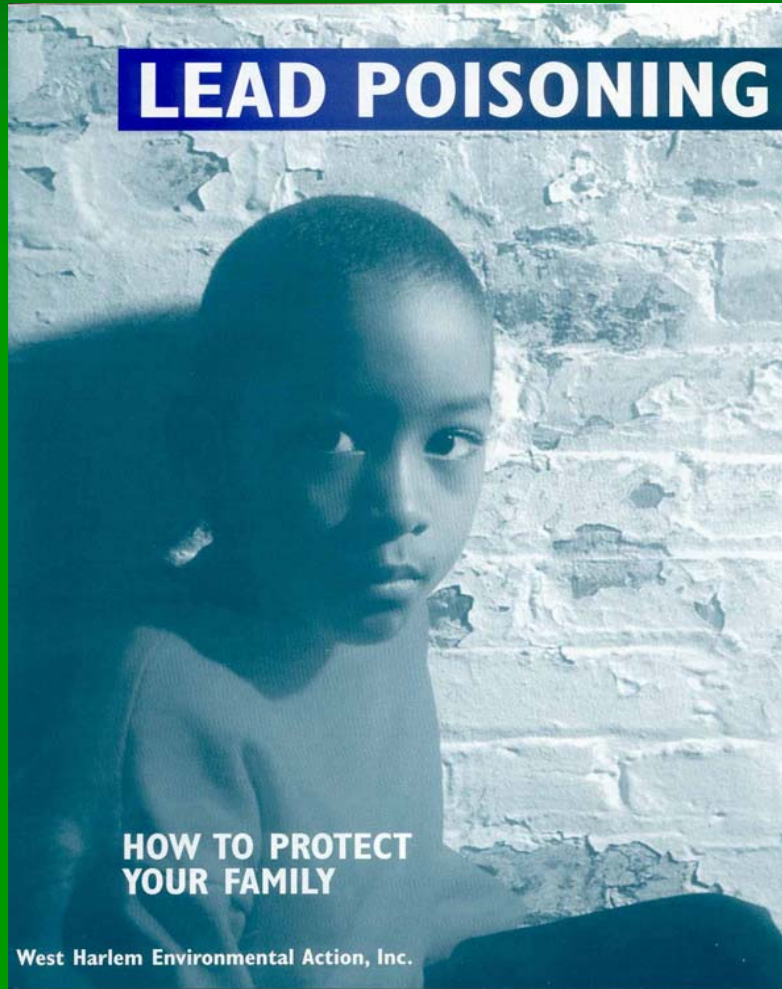
## 1<sup>st</sup> Level of Environmental Health Literacy: Raising Awareness

- 10-year partnership with Columbia's Children's Environmental Health and NIEHS P30 centers.
- Early years: led local public outreach campaign through fact sheets, health fairs to raise awareness of 5 key actions parents can take in the home.
- Hosted conferences on asthma in 1996, lead poisoning, children's environmental health, and Ethical Issues of Genomic Research.

Genetics Conference of 400 including 60  
CBOS nationally, learn and assess  
challenges, benefits of genomics research.



# 1<sup>st</sup> Community Conference On Lead Poisoning in NYC



- Led to 6-year coalition effort to achieve more protective lead legislation at the City Council level.
- Parent training and organizing was one essential key to success.

# UPTOWN EYE

April/May 1998

West Harlem Environmental Action  
WE ACT for Environmental Justice. A Decade of ACTivism & ACTION.

Vol. III, No. 1

## Special Issue: Children's Environmental Health

# ALL CHOKED UP:

## Diesel Exhaust Exposure Among Adolescents in Harlem

by Joanne Yankura, MPH and  
Mary Norbridge, Ph.D.

In 1998 concern was raised by members of the Harlem community when the Manhattanville bus depot was constructed on 139th Street, directly across from Intermediate School 43 in West Harlem. It was the sixth bus depot operated by the Metropolitan Transportation Authority (MTA) constructed in a Northern Manhattan neighborhood - a seventh depot is located on 59th Street.

In 1994, WE ACT approached investigators at the Harlem Center for Health Promotion and Disease Prevention to request their assistance in determining what impact diesel exhaust might have on the community's health, especially on the respiratory health of its youth, a heavily exposed and vulnerable population. As a result, a study was designed in order to determine the background exposure levels to diesel exhaust and to measure baseline lung function of school aged Harlem youth.

*Continued on page 3.*



## UPTOWN EYE

# ALL CHOKED UP:

## Diesel Exhaust Exposure Among Adolescents in Harlem

*Continued from page 1*

### Who conducted this study?

The selected study group was seventh grade students at Thurgood Marshall Academy located at St. Nicholas Avenue and 135th Street. Appropriate approvals were obtained from the students' parents/guardians, the school's principal, Dr. Sandye O. Johnson, and the Institutional Review Board of Columbia University.

The study was conducted jointly by WE ACT staff -- Executive Director Peggy Shepard, Program Director Cecil Cocbin-Mark, Youth Coordinator Luis Benitez -- and researchers at the Harlem Center for Health Promotion and Disease Prevention led by Dr. Mary Northridge and the Center for Environmental Health in Northern Manhattan, especially Drs. Patrick Kinney and Joseph Graziano.

The students' parents/guardian were informed of the study design and purpose at a pre-study meeting held at Londei's restaurant in Harlem to help address any questions or concerns among the parents/guardian regarding their child's participation in the study. Informed consent was obtained for each child; no parent or guardian refused participation.

### Why was it important to examine the extent to which youth are exposed to diesel exhaust? What is diesel exhaust composed of?

Diesel exhaust has harmful effects on human health. Motor vehicles produce most of the diesel exhaust that pollutes the earth's environment. A total of 445 compounds have been identified in the particle and gaseous components of diesel exhaust emissions. Some of these compounds -- sulphur dioxide, nitrogen dioxide, particulate matter (soot) and gaseous hydrocarbons -- are emitted in amounts that have a known biological impact on human and environmental health. During combustion, unburnt carbon atoms from the carbon-rich diesel fuel form carbon particles that reduce the amount



*Dr. Patrick Kinney*

in the atmosphere, particles can greatly decrease visibility until rainfall clears the air. Particles contribute to the visible layer of dirty soot that coats buildings and other physical surfaces in urban neighborhoods. The outer layer of many buildings and monuments are permanently decayed when acidic particles land on them and produce corrosive chemical reactions.

### How can diesel exhaust affect you?

#### Who does it affect the most?

Long-term exposure to diesel exhaust in occupational studies suggests a 1.2 to 1.5-fold increased risk of de-

On Tuesday, April 15th 1997, twenty-four students from Thurgood Marshall Academy traveled to Columbia University's Health Science Campus in order to participate in the study.

- Twenty-four students participated in the study by responding to a questionnaire.
- All of the students were from similar backgrounds.
- The average student age was 12.8 years (range 12-14).
- Twenty-three students considered themselves to be African American.
- One student considered himself

### 1) Questionnaire

A questionnaire was administered to each student by members of WE ACT's Earth Crew Youth Leadership Program, a community based outreach initiative for youth leadership development through environmental education and community service. The questionnaire requested demographic data (age, sex, race/ethnicity, address), information regarding exposure to tobacco smoke, and asthma history.

#### Key information reported on the questionnaire:

- Nine students - 38% - reported having mothers who currently smoke cigarettes.
- Nine students - 38% - reported having asthma.
- Two students identified themselves as current tobacco smokers, neither of whom reported a current history of asthma.

The number of students who re-

**Exposure to diesel exhaust is greatest  
on streets and intersections heavily traveled  
by diesel buses and trucks.**

# Environmental Health & Justice Leadership Training

Week 1: Introduction, Principles of Toxicology, Toxics/Treasures Tour.

Week 2: Asthma & Environment, Air Pollution and Our Health.

Week 3: Diesel Exhaust & Health, Housing & Health (pests, pesticides, IPM)

Week 4: Housing & Health II, Mold & Indoor Air Quality, Lead Poisoning



# 24 Hours Total of Six 3-Hour Sessions on Weeknight

- Week 5: Cancer and the Environment, Solid Waste Management.
- Week 6: Putting It All Together— Presentation of all our visions of healthy communities and discussion on EJ.
- Six- Hour Saturday Session: Community Organizing, Media Training, Environmental Planning.

# Training Based On Core Environmental Science Course

- Uses popular education principles.
- Introduces basics of toxicology, risk assessment, environmental fate/transport.
- Provides sophisticated information accessible to range of education, literacy, ages.
- 11 guest lecturers: senior/junior researchers, professors, staff from CBOs.

# Awareness Leads To Personal Steps At Home, At Work

- Remarkable retention rate: only 4 of 39 dropped out.
- 200 residents have graduated.
- Resource binder with 70 articles, fact sheets, maps, booklets, talking points provided to participants.
- City Councilman, Dean Rosenfield of the Mailman School attend graduations.

# Evaluation Results After Each Session & At End of Training

- Connection to workshop presenters is important; some too academic.
- Valued small group discussions after each lecture where they could ask more questions, and address information to their lives with goal of articulating solutions.
- Wide range of interest in materials presented that touched on issues of personal concern.

# Trainings Refocused on Healthy Homes

- Week 1: Intro to Housing & Environmental Health.
- Week 2: Safe Ways To Get Rid of Pests
- Week 3: Asthma and Mold
- Week 4: Community Organizing 101
- Week 5: Air Pollution & Intro to EJ

# Training Modified To Reflect Evaluation of Prior Training

- WE ACT staff worked with researchers and delivered our own lectures.
- Worked closely on lecturers' presentations.
- Targeted 8<sup>th</sup> grade level for presentations.
- Cut topics, expanded small groups' time.
- Increased hands-on activities to help trainees discuss, apply the information.
- Trained prior graduates to be facilitators.

# Evolving Methods to Ensure Effective Trainings

- Added EJ History Timeline so trainees could add their own community histories.
- Shared information on CBPR and EJ projects funded by NIEHS in other states, to connect issues and efforts.
- Added Toxics and Treasures Tour to connect issues, trainings with interaction within the community environment.

# Focus Group of Prior Graduates Confirm Evaluation Surveys

- Topics that affected them personally were most relevant ie. pesticides.
- Shared mold video with friends.
- Role playing empowered them to speak up on issues and with their doctor.
- Two months after the training able to recall best presenters.



# Offered Suggestions For Improving The Training

- Run trainings over longer period of time.
- More time for small groups, discussion.
- Role-playing exercises enhanced understanding of advocacy principles.
- Attitude of presenter critical to learning.
- More time for Q and A.
- Toxic Tour should be required.
- Community organizing sessions on Saturdays.

## HEALTHY HOME HEALTHY CHILD

The Truth About the Environment...  
And How to Make it Safe.

### The Truth about AIR POLLUTION... Don't just breathe it all in!

Dirty air causes lung diseases. The tiny particles from diesel exhaust from trucks and buses cause cancer and can trigger asthma attacks, various cardiopulmonary ailments, and premature deaths.

#### What is air pollution?

Air pollution includes tiny particles as well as gases, such as ozone. Most air pollutants are produced by burning fossil fuels, including coal, oil, diesel, gasoline, and wood. People inhale the harmful particles, called particulates, which lodge into the lungs and cause illness. The largest polluters are cars, trucks, and buses, coal-fired power plants, and industrial boilers.

#### What types of health problems are caused by air pollution?

Air pollution can cause diseases and trigger asthma. Air pollution has been linked to reduced lung function, increased hospital and emergency room admissions, and premature death. A recent study by the Natural Resources Defense Council linked particulate pollution to 64,000 deaths per year.

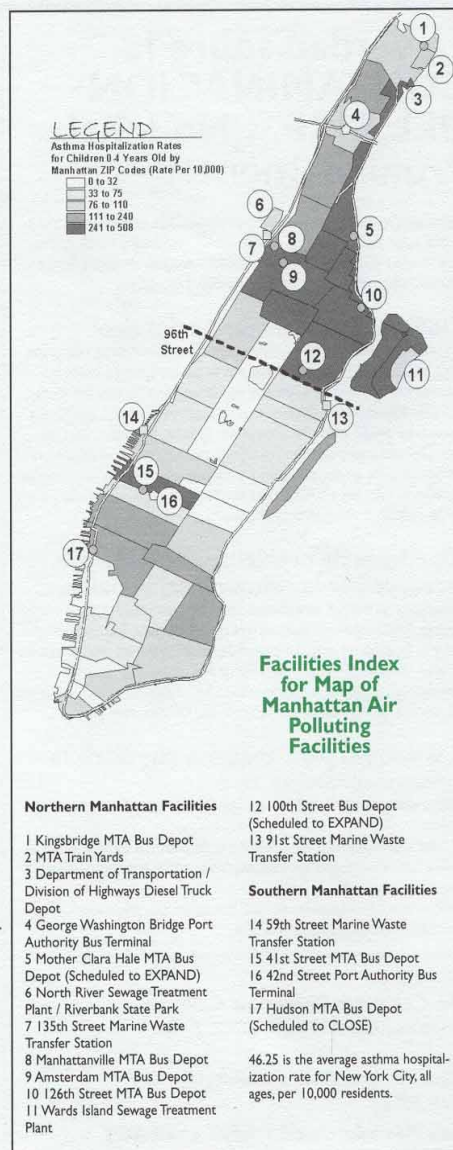
#### Tips for Fighting Air Pollution

- Use mass transportation as an alternative to driving whenever possible.
- Write to the New York City Metropolitan Transportation Authority and demand that they convert all diesel buses and depots to natural gas.
- Join a clean air campaign in your community to combat air pollution. For information contact West Harlem Environmental Action: (212) 961-1000.

Developed by:  
**The Columbia Center for Children's  
Environmental Health (CCCEH)**

Community Partner:  
**West Harlem Environmental Action  
(WE ACT)**

For Further Information Contact  
**WE ACT at (212) 961-1000**



- Co-sponsored with  
Columbia University  
Center for Children's  
Environmental Health
- Translate center findings  
on indoor air exposures  
and outcomes into  
trainings and more  
protective city policies  
and legislation.



## *Specific Aims of the Healthy Home, Healthy Child Campaign*

- (1) expanding the capacity of low-income communities of color to improve children's environmental health by educating area residents and organizations about the Center's work and other supporting research.
- (2) training community stakeholders to apply this information in ways that will help modify current policies to improve community-wide environmental conditions.
- (3) coordinating their efforts to translate Center findings into policy results.



# Our Major Goals for the Healthy Home, Healthy Child Campaign



- **Win** healthier homes for NYC tenants.
- **Illustrate** the connection between poor quality housing & poor health.
- **Reduce** use of dangerous household products (ex: Tempo & Tres Pasitos)
- **Empower** residents to respond to health risks linked to poor quality housing.
- **Organize & Mobilize** residents to win safe and affordable housing



# Summary of Specific Goals - Phase Two:



- Translate and disseminate the research of the Center to the larger community.
- Form a Housing and Health Leadership Council comprised of motivated residents and organizations from communities in Northern Manhattan and the South Bronx, that will identify and pursue a needed change in housing policy and practice.
- Develop a citywide network of housing and health organizations to share information and resources related to housing and children's health, and to serve as a platform to discuss and address the policy issues identified by the Leadership Council on a citywide scale.



## Summary of Accomplished Goals:

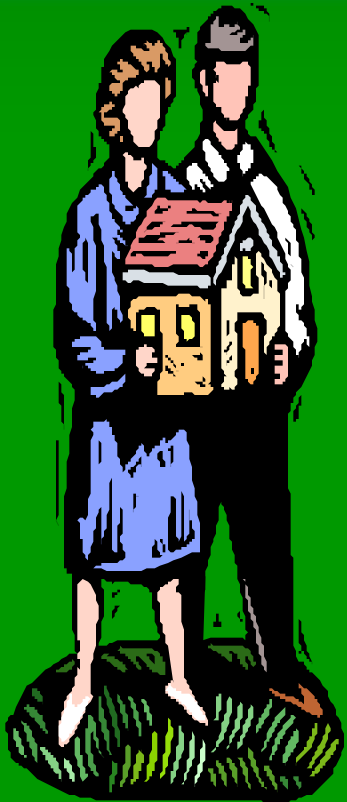


- Organized the “Mold is Taking Hold: Creating Healthier Indoor Environments” held on March 28<sup>th</sup>, 2006
- Recruited 15 community based organizations to the Our Housing is Health Network – held 2 network meetings- 4/27 and 5/23.
- Made formal presentations Brooklyn Borough President Cabinet meeting, Project Remain/Slumlord Accountability, “Black Equity Alliance Roundtable.”
- Delivered bi-lingual “Mold is Taking Hold” and Safer Ways to Eliminate Pests” workshops to 75 residents .
- Presentations to key NYC and NYS legislators.
- Organized a “Know Your Rights” workshop for residents living in substandard housing. 6/27/06



# Mold is Taking Hold- Policy Platform

1. Develop an interagency taskforce to address the mold problem.
2. Increase and advance the training of Housing Preservation and Development inspectors
3. Strengthen the Housing Maintenance Code
4. Develop mechanisms to regulate and license mold remediators in NYC
5. Increase awareness of the mold epidemic by educating landlords, insurance companies and financial institutions on mold. prevention, health effects and mold protocol.
6. Advocate for a resolution out of the NYC Council calling on the Governor and NYSDOH to expedite the creation of the NYS mold taskforce





# Healthy Home, Healthy Child Campaign Asks:

1. Modify the building codes by local amendment or at the code development level to phase out the use of construction materials that promote mold growth
2. Funding support for NYCHPD/NYCDOB to conduct additional research into construction practices, building materials, building designs and occupant practices to identify factors associated with mold growth in indoor environments
3. More required actions on the part of landlords and owners including-inspection, disclosure, public housing, liability.
4. Support Assembly bill AO11108 – requires the disclosure of indoor mold history





# *Outcomes*

- Each training strengthens the capacity of residents and community-based organizations, serving as a basic foundation that equips stakeholders with the scientific research, knowledge of legal rights, healthier alternatives, and resources necessary to create and sustain healthier home environments.



# *Training Outcomes*



❖ The trainings increase resident's level of engagement, directly involving them in the design and implementation of comprehensive solutions.

❖ Through our interactive and capacity-building trainings, a broad spectrum of citywide, community-based organizations and residents primarily in Northern Manhattan and the South Bronx have acquired an increased awareness of housing related environmental health issues and deficiencies in current policies.

# Decreasing Health Disparities

- The partners' roles in creating awareness of, and leading the fight for environmental justice and the reduction in health disparities around asthma has been widely recognized and cited (Brown et al, 2003; Lee, 2004; Corburn, in press; Blackwell et al, 2005). As Brown et al (2003) have noted:
- "Asthma has become perhaps the primary disease in which poor and minority people have pointed to social inequality and have engaged in widespread political action. The case of asthma demonstrates how environmental justice approaches place ethics and rights issues in the center of health policy" [40].

# Practices for Change

- Collective Problem Identification
- Collective Problem Solving
- Collective Visioning
- Collective Responsibility
- Collective Action

# Personal Transformation

## Transformed Communities

- EHJLT encouraged leaders to explore the various environments in which they lived
- Challenged leaders to understand their roles and responsibilities in creating the neighborhoods they've envisioned
- Visualized the type of neighborhoods they wanted for themselves and for future generations
- Charted a course of action to achieve their vision

# Transforming Communities from the Inside Out

- EHJLT participants brain stormed ways to incorporate the collective wisdom of the community in their struggles for environmental justice
- Utilized personal observations and experiences to frame discussion on relevant Env. Health and Justice topics
- Identified various barriers to effecting change
- Recognized the inherent community power, resources, structures and mechanism for effecting change

# Neighborhood Action for EJ

- **Asthma and Diesel**

**Garbage, Pest and Pesticides Use**

- **Asthma and Mold**

- **Sustainable Development**

-

# Our Housing Is Our Health

## **WE ACT Healthy Homes Street Team**

### Neighborhood Pesticides Survey Team

- Investigated the availability of pesticides at 135 neighborhood stores
- To determine the effectiveness of a Federal ban of 2 of the most toxic pesticides used in Northern Manhattan

## **Healthy Homes Leadership Council**

- Identified indoor air quality issues in the community and advocated for needed policy change. E.G: Revision of the NYC Mold Guidelines to address the prevalence of toxic mold



# Residents Oversight Council

- Demanded regularly scheduled meetings with MTA managers to discuss bus and bus depot operations in their community
- Demanded that the MTA undertake measures to green their neighborhoods. E.G: Tree planting in East Harlem near a bus depot
- Demanded that residents are informed and engaged in all processes that would impact their health and environment. E.G: The Mother Clara Hale Diesel Bus Depot rebuild

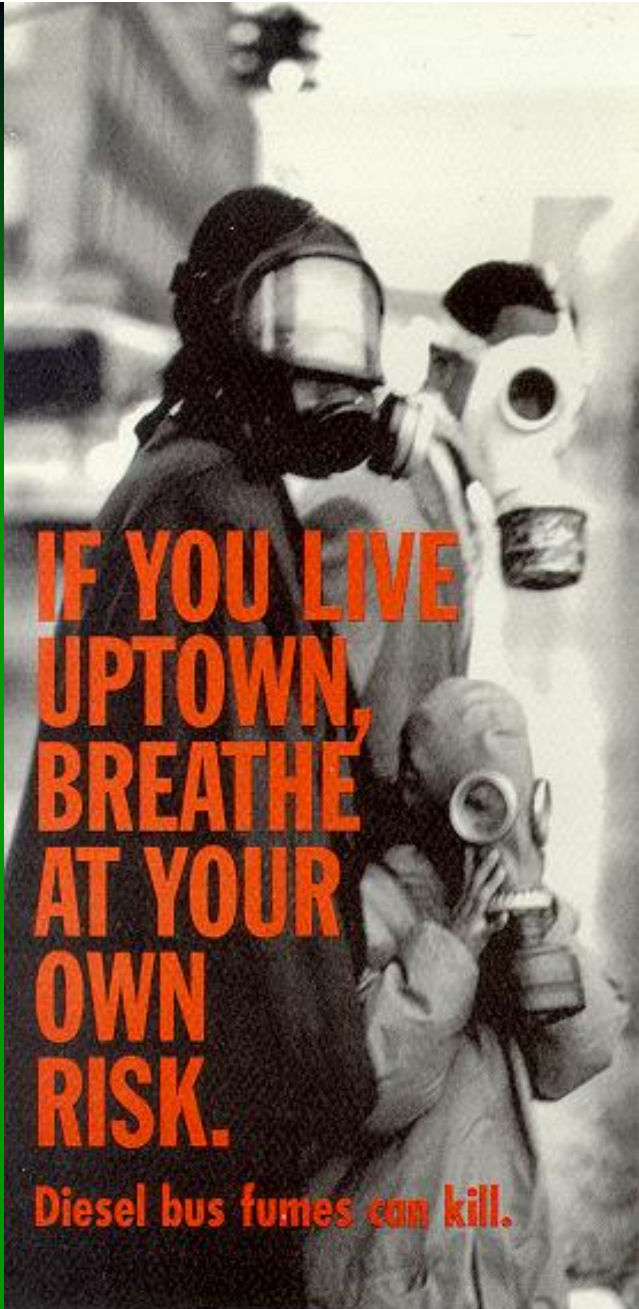
# Rosa Parks School Bus Campaign

- Encouraged parents to send letters to decision makers urging them to require that diesel particulate filters be installed on all NYC public school buses
- Convinced the NYC Department of Education to test the most protective particulate filters on a local bus route in the community to determine long term feasibility

# Harlem Waterfront Council

After much organizing and advocacy to create a waterfront park on an acre long strip of land located on the Hudson River, residents will now be involved in:

- Monitoring maintenance and operation of the park and
- Providing direction for events and programming of the park



**IF YOU LIVE  
UPTOWN,  
BREATHE  
AT YOUR  
OWN  
RISK.**

**Diesel bus fumes can kill.**

**West Harlem Environmental ACTION**  
*WE ACT for Environmental Justice.*





# Issue of EHP, guest edited by WE ACT, published April, 2002

