

# DEVELOPING TOOLS TO ASSESS EXPOSURE in Minority and Low Income Communities

*Moving Science  
into Action*

*A cooperative agreement between  
EPA's National Exposure Laboratory  
and North Carolina Central University (NCCU)*

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## Why is NCCU studying exposure in minority and low income communities?

Research has shown that minority and low income are at greater risk of being impacted by environmental hazards. Studies conducted to date have used surrogate measures of exposure because of the lack of data on actual exposures in these communities. The objectives of this project are to:

- assess environmental exposures in local environmental justice communities that may be impacted by environmental hazards
- strengthen the training provided to NCCU environmental science students by developing faculty expertise and laboratory and field capabilities

The long-range goal is to develop and validate tools which can be applied to similar communities.

Funding was provided through the support of U.S. Congressman David Price (D-NC-4)

## An 18-member Advisory Board provides guidance for the project

The Advisory Board includes representatives from:

- NC Department of Environment and Natural Resources
- NC Department of Health and Human Services
- National Institute of Environmental Health Sciences/National Institutes of Health
- NC Environmental Justice Network
- West End Revitalization Project
- Land Loss Prevention Project,
- Research Triangle Institute
- University of North Carolina Chapel Hill School of Public Health
- NCCU
- U.S. EPA

## What are the plans for the project?

The project began in September 2001 and will continue through 2006. Activities to date include:

- establishing the Advisory Board
- identifying an EPA Scientist to lead the exposure field studies and provide training for NCCU faculty and students
- developing guidelines to help select and prioritize the communities to be studied
- developing the NCCU environmental science laboratories to prepare for the field studies
- drafting proposed communication plans and study designs for community consideration

## Selecting the Communities for the Field Studies

With input from the Advisory Board, guidelines were developed to help select and prioritize the communities in which the field studies will be conducted. These include:

- an Environmental Justice (EJ) community
- identifiable and measurable environmental problem near a potentially exposed population and availability of baseline data on potential sources of exposure
- interested community group or ability to develop a group
- within a 60-mile radius of NCCU
- exposure benchmark available for comparison of pollutants
- feasibility to recruit participants
- unique contribution of study
- opportunity to develop NCCU Environmental Science Program
- capacity/capability of NCCU to collect and measure pollutants
- opportunity to partner with state and/or local agency
- maximum student and faculty involvement

Three local communities are currently under consideration: Durham, Moncure, and Roxboro. NCCU is developing proposed communication strategies and exposure field study designs to present to the communities

## Environmental Justice

Environmental justice ensures that no segment of the population, regardless of race, color, national origin, or income, suffers disproportionately from adverse human health or environmental effects and that all people live in clean, health, and sustainable communities.

As a historically black college/university (HBCU), NCCU is especially well positioned to further scientific understanding of the exposure of environmental justice communities to pollution.

## Expected Results

- to determine pollutant exposures in representative central North Carolina environmental justice communities
- to develop improved tools for conducting community-based exposure research in environmental justice communities
- to address the concept of "cumulative exposure" which addresses additional stressors that may influence a person's exposure to environmental pollutants
- to fortify NCCU's Environmental Sciences Program through faculty and student training and improved laboratory facilities

