

TITLE

Spatial Analysis of SES and Environmental Hazard Data to Address Environmental Justice Issues in New Jersey

THEME

Advance Environmental Public Health Science and Research

KEYWORDS

environmental justice, disproportionate impacts, spatial analysis

BACKGROUND

Various studies show communities of color and low-income are exposed to a disproportionate amount of industrial pollution and other environmental hazards. New Jersey is the most densely populated state in the nation and has the nation's highest median household income. Yet, New Jersey also has significant populations in poor urban areas, creating a wide variation in racial and economic characteristics across 566 municipalities. In February 2004, New Jersey adopted its first statewide environmental justice policy in the form of a Governor's Executive Order. Under this Order, New Jersey is targeting compliance and permitting strategies for industrial facilities in communities of color and low income.

OBJECTIVE(S)

To identify communities disproportionately impacted by contaminated and regulated sites and to develop proactive strategies to reduce environmental impacts.

METHOD(S)

Data from the U.S. Census Bureau at the block and census-tract level are used to evaluate the spatial variation in SES characteristics. These data are supplemented by residential land use and other geographic data maintained by NJDEP. Environmental hazard data are compiled from the New Jersey Environmental Management System (NJEMS), which tracks data for over 17,000 contaminated sites and 20,000 regulated sites.

RESULT(S)

The first analysis focuses on density of contaminated sites in relation to environmental justice communities and population density. Results of these analyses are used to assess the current status and next steps for remedial actions at sites in close proximity to residents. Additional analysis will include density of air toxics emissions and comparisons with the U.S. EPA's National-Scale Air Toxics Assessment (NATA).

DISCUSSION/RECOMMENDATION(S)

The presentation will discuss results of current analysis, including methods, challenges and next steps. Methods used to link SES characteristics of populations to environmental hazards also apply to designs of EPHT systems where it is critical to maintain consistent links to the underlying population to calculate and evaluate variation in health outcomes.

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