

INTRODUCTION TO THE CAMDEN WATERFRONT SOUTH AIR TOXICS PILOT PROJECT

Protecting Communities from Toxics has been identified as a priority initiative for the New Jersey Department of Environmental Protection (NJDEP) by Commissioner Campbell. One aspect of this initiative is to develop the ability to quickly assess how citizens are being exposed to toxics in many neighborhoods around the state and then identify risk reduction strategies.

Pilot: With seed money provided by a grant from the U.S. Environmental Protection Agency (USEPA), NJDEP is developing the tools necessary to assess citizen exposure to pollutants, beginning with Air toxics. (Air toxics, for the purpose of this pilot project, are generally those pollutants for which USEPA has not set Air Quality Standards.) The City of Camden was recommended as a good place to start, so we have chosen the Camden Waterfront South neighborhood for this pilot. Waterfront South is defined for the purpose of this project as Census tract 6018 (see attached map). This neighborhood is bounded on the North by Atlantic Avenue, on the East by I- 676, on the South by Newton Creek, and on the West by the Delaware River.

Background: We knew from the NJDEP Air Toxics Inventory and other databases that there are several sources of Air Toxic emissions located in and near Waterfront South. A drive through the neighborhood also revealed that there are a great many air pollution sources of particulate in the neighborhood; so exposure to airborne particulate matter was added to the scope of the pilot. Although NJDEP has been monitoring air toxics and particulate in the air for a number of years in Camden City, detailed information about air toxics and particulate matter emitted by individual facilities in this neighborhood is very limited. Information about how these emissions result in actual exposures for the citizens living in the neighborhood is even more limited. To fill these important information gaps, this pilot will explore all available sources of air emission information and develop ways to present a coherent description of possible inhalation exposure to outdoor pollutants in Waterfront South.

The Basic Steps

1. Identify the facilities and other sources emitting air toxics and particulate matter in and around the neighborhood.
2. Collect detailed information about those sources, including how much pollution is emitted and other data that are needed to describe the emissions.
3. Use dispersion models to describe where the emissions go in the air and what the inhalation exposures might be.
4. Confirm some of the dispersion modeling by comparing the results to ambient air monitoring data.
5. Use risk assessment to convert the air concentrations into risk estimates.
6. Identify the air toxics and particulates that pose the highest risks to the residents in the neighborhood.
7. Identify the sources that contribute to those pollutants which cause the greatest risk.
8. Brainstorm ways to reduce the overall risk.

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