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Purpose/Utility of Research

1. The EPA is developing a better understanding of community-based cumulative risk assessments (CBCRA) to consider multiple environmental stressors when prioritizing courses of action.

2. New tools and methods are being developed that focus on local-scale applications, such as near-road air quality models and decision support tools that foster interdisciplinary collaborations.

3. The EPA is working with our RESES community partners in order to develop applications that can then be used across the country in a variety of local applications.

Connection to SHC Portfolio

- 2.2.1. Enhancing Community Public Health
- 2.2.3. Securing and Sustaining EJ
- 1.61 Decision Science & Support Tools
- 2.62 Community Public Health and Well-Being
- 4.61 Systems-Based Assessment Methods for Community Sustainability

Region 5: Chicago, Illinois
- Working with partners in the Roseland community to collect information and develop potential mitigation actions.
- Strong CBCRA and Superfund focus.
- Developed "promising practices" document for a wide range of community EJ concerns.

Region 4: Birmingham, Alabama
- Collaboration with the community of North Birmingham, a seven-neighborhood area located just north of downtown.

Region 4: Charleston, South Carolina
- Developing air quality models for the ports and highways to evaluate near-source air quality (photo).
- Largely focused on port operations and the potential local effects of port expansion.

Region 2: Newark, New Jersey
- Partnering with a community group in the Ironbound district, a community bordered by three railways and a major airport.
- Using Citizen Science Air Monitoring (CSAM) units to measure local conditions.
- Administrator McCarthy was recently given a demonstration on the CSAM units (photo).
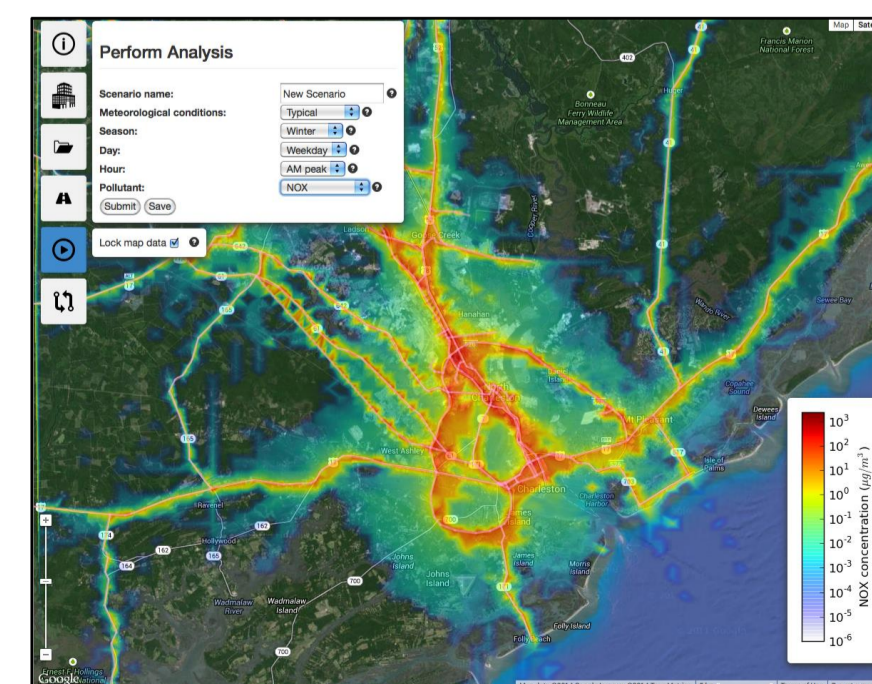
Region3: Newport News, Virginia
- Partnering with a community in southeastern Newport News that has multiple ports and industrial sites in close proximity to residential areas.
- Working through the CCAT methodology to address risks and mitigation options.
- Partnering with students at UNC – CH to expand C-PORT coverage.
- Developed the Policy Education Research Outreach (PERO) model for best practices in community partnerships .

Intended End users

EPA is advancing CBCRAs by working with local areas to research the newest scientific approaches and then develop methods that can be used in a wide variety of situations by other communities.

ORD, Regional offices, and community groups will benefit from this research as they continue to work towards solutions for a wide range of environmental problems.

Lessons Learned

- Building partnerships and defining roles and responsibilities is key to a project's progress.

- Community values and decision analysis must be considered throughout the CBCRA process.

- After listening to community feedback and evaluating available resources, issues that are the greatest risk are not always the highest priority for mitigation – i.e., targeted risk reduction.

- Data, models, and measurements are powerful tools for engagement and action so long as they are implemented in an understandable and collaborative manner