Using Health Impact Assessments to Address Environmental Health Concerns and Promote Opportunities for Improved Health

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I. State experience with evaluating health effects/impacts associated with cumulative impacts of stationary and mobile sources in environmental regulatory settings

II. Enhancing the National Environmental Policy Act (NEPA) through incorporation of health outcome data

III. MA State Transportation Reform: Healthy Transportation Compact

IV. Challenges/opportunities
I. State experience in evaluating health effects/impacts as part of the environmental regulatory process

- Historically, environmental regulatory decisions related to NEPA have relied on risk assessments associated with project specific contaminants of concern to evaluate potential environmental health impacts.

- The public, however, generally wants to best understand how a given project may impact health and demands evaluation of cumulative environmental exposures and disease status in a given host community.

- As a result, proponents of projects subjected to NEPA and environmental regulatory agencies charged with oversight of the process, meet with resistance.
MA examples of using health data to address community concerns and streamline the permitting process

- Chelsea – ULSD peak power plant
- Somerville – MaxPak
In May of 2007 examined pediatric asthma prevalence from four elementary schools (complex of 1,800 students) located ¼ mile from the proposed site.

3 out of 4 schools at the complex had pediatric asthma rates statistically significantly higher than the statewide rate.

MDPH/BEH evaluated proponents estimate of impacts on community for facility related emissions and recommended a number of additional analyses to better characterize potential impact.

MDPH/BEH also recommended that various mitigation efforts to reduce the proposed impacts should be considered once the more refined impact estimates were determined.

Unfortunately, in large part due to the economic decline, this project did not go forward.
Somerville

Project Goal: Provide linkage through city of Somerville to connect with Minuteman bike trail to the west and eventually be linked with the MA Central Rail Trail

Issue: Nearby residents were concerned about railroad tie removal and building demolition at MaxPak site and exposure to contaminants/fugitive dust and impacts on health

- MaxPak site consisted of two large abandoned buildings and railroad ties/line no longer in use
- Site located only yards away from densely populated residential neighborhood
- Primary concerns raised by state legislators related to asbestos and other airborne contaminants impacting health of nearby residents
In response, MDPH/BEH reviewed plans for railroad tie removal and building demolitions to ensure that best practices were implemented during removal/demolition to minimize offsite dust migration.

MDPH/BEH also reviewed developer plans to conduct continuous air monitoring before and during demolition activities to ensure no offsite migration of contaminants.
Somerville, cont.

- Photograph shows site today; railroad bed on one side of site cleared and ready for bike path development. Bike path also leads to MBTA subway system; buildings have been demolished and site is ready for residential development.
II Enhancing NEPA through incorporation of health outcome data

- A review of the literature demonstrates that individuals with preexisting asthma, chronic lung disease, coronary heart disease, and heart failure who are exposed to air pollutants suffer from increased health impacts.

- While risk assessment used to generate health-based standards/guidelines considers sensitive populations (e.g., the very young and old), ambient levels below the standards/guidelines can present concerns in communities with pre-existing disease burdens higher than state/national trends.

- There are also a wide range of less obvious health impacts that may be missed without a systematic effort to identify and address them using the best available data.

- For that reason, public health and environmental regulatory agencies must work together to enhance current protocols.
Elements of an Enhanced Review

- Identify affected community (ies) through modeling of air quality impacts of proposed project

- Assess background concentrations of COCs in affected community (ies)

- Assess total project emissions (stack, vehicular, etc)

- Assess available community health statistics/health indicators (e.g. disease outcomes, income, employment)

- Determine need for mitigation based upon review of environmental and health data

- If mitigation efforts can address environmental health impacts, agencies can work with project proponents on community benefits to improve health (e.g. infrastructure improvements, health promotion efforts)
Are health data specific to a given community available for proponents to access/evaluate?

- Yes. In 2002, Congress authorized the US CDC to establish a nationwide Environmental Public Health Tracking (EPHT) program.

- EPHT is the on-going collection and dissemination of environmental and health data.

- EPHT is currently funded by the US Centers for Disease Control and Prevention (CDC) in 23 states and NYC (goal eventually to include all states).

- EPHT has helped expand data, tools and workforce in funded states.
  - Methods and tools for local health impact are being developed in a collaborative project with states, CDC, EPA and Emory University.

- Resources to expand EPHT across all states are critical.

- Identifying mechanisms to provide data and simultaneously address privacy concerns are also critical and states and CDC are ensuring protection of privacy/data in the EPHT system.
III. MA State Transportation Reform: Healthy Transportation Compact

- Overall goal intended to streamline the process of transportation improvement projects in the Commonwealth.

- Section 33(v) calls on the Department of Public Health to establish methods to implement the use of health impact assessments to determine the effect of transportation projects on public health and vulnerable populations;

- Section 33(x) institute a health impact assessment for use by planners, transportation administrators, public health administrators and developers.
IV. Challenges/Opportunities

Challenges to the current framework

- In environmental regulatory arena, stakeholders (including health officials and the general public) are often not aware of proposed projects before initial local and state approvals are granted.

- Under current NEPA guidelines Environmental Impact Reviews (EIRs) tend to be viewed by all participants as either burdensome or not adequate in addressing community health concerns.

- Need to raise awareness of the HIA comprehensive process and the aim of addressing environmental health concerns while allowing for industry progress and community benefits particularly those that promote health.
Opportunities within an enhanced framework building upon the HIA approach

• Evaluating community health data as a compliment to risk assessment, demonstrates a more comprehensive approach to addressing community environmental and health concerns

• Proposing mitigation, where possible, can allow projects to move forward and avoid regulatory and legal challenges

• Working with proponents and stakeholders to identify health promotion initiatives can serve to improve health status in a given community and reduce overall health care costs