



Brownfields Public Health and Health Monitoring

Purpose of this Document

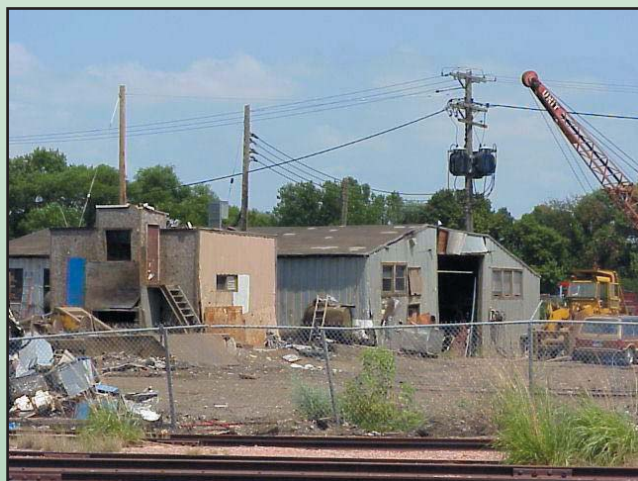
The Small Business Liability Relief and Brownfields Revitalization Act (“Brownfields Law”, P.O. 107-118) provides new opportunities to consider the health impacts of brownfields. This fact sheet has been developed for brownfields staff, grantees, and stakeholders to assist them as they provide outreach and technical assistance to brownfield communities. This fact sheet is structured to:

- summarize health provisions of the Brownfields law;
- define health monitoring as a public health practice; and,
- identify tools and organizations that can support health monitoring in brownfields communities.

Brownfields and Public Health

The Brownfields law defines brownfields as “real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.”

It is estimated that there are more than 450,000 brownfields in the U.S. Communities may focus on environmental impacts of brownfields but they may also wish to consider the broader public health impacts of brownfields, including:



The Pitt Salvage Yard in Sioux Falls, South Dakota.

Brownfields Redevelopment: Enhancing Community Wealth and Community Health



- Safety – abandoned and derelict structures, open foundations, other infrastructure or equipment that may be compromised due to lack of maintenance, vandalism or deterioration, controlled substance contaminated sites (i.e., methamphetamine labs) and abandoned mine sites;
- Social & Economic – blight, crime and vagrancy, reduced social capital or community ‘connectedness’, reductions in the local government tax base and private property values that may reduce social services; and,
- Environmental – biological, physical and chemical from site contamination, groundwater impacts, surface runoff or migration of contaminants as well as wastes dumped on site.

Cleaning up brownfields properties can improve public health in a number of ways, including addressing safety or environmental concerns at the site. It may also provide an opportunity for communities to create safer, healthier communities through the redevelopment process and use of smart growth principles. Redevelopment focused on improving public health may increase recreational or green space creation to encourage physical activity, community gardens and restful public spaces that encourage interaction while also reducing the effects of heat islands and improving storm water management. Adding accessible and affordable grocery stores as well as pharmacies or other health care facilities offers amenities important to meet community needs as part of healthier redevelopment and reuse as well as job opportunities for community residents.

The Brownfields Law and Health Monitoring

The Brownfields Law expanded the types of government and non-governmental organizations eligible for grant funding, the types of sites eligible for funding and the resources available to promote sustainable brownfields cleanup and reuse. It creates a new focus on the impacts of brownfields, particularly in disadvantaged communities and among sensitive populations. The law allows a local government to spend up to 10% of a brownfields grant for:

- “(i) monitoring the health of populations exposed to one or more hazardous substances from a brownfield site; and
- (ii) monitoring and enforcement of any institutional control used to prevent human exposure to any hazardous substance from a brownfield site.” (Section 104(k) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. 9604(k))

The Brownfields law requires the EPA to organize an annual national competition to review and select brownfield grant (assessment, revolving loan fund (RLF), and cleanup) recipients. Since passage of the law, the majority of grants directing funds to health monitoring are assessment grants. Several cleanup grants and one revolving loan fund grant also have allocated funds for health monitoring.

An assessment grant provides funding for a grant recipient to inventory, characterize, assess and conduct planning for cleanup and redevelopment and community involvement. A cleanup grant provides funding for a grant recipient to carry out cleanup activities at brownfield sites while a revolving loan fund grant provides funding to capitalize a revolving loan fund that may make loans or subgrants to carry out cleanup activities.

Given that each type of brownfield grant funds different activities, health monitoring activities under each



An abandoned building in Providence, Rhode Island.

type of grant are likely to vary. It is important for local governments to tailor health monitoring activities to reflect activities eligible to the appropriate grant. Grant and health monitoring activities may also depend on the type of contaminants or issues at a particular site or community. General types of potential activities include, but are not limited to:

- Examining site access patterns to determine the potential for exposures or site hazards (e.g., contaminated soils, open foundations) that pose safety concerns;
- Mapping site features that may affect exposures such as site proximity to drinking water wells or surface water bodies;
- Monitoring health as part of community-wide inventory activities;
- Collecting or linking baseline health and environmental measures to inform redevelopment planning options. For example, if health monitoring or health impact assessment activities showed limited access to health care services in the brownfield community or a lack of sidewalks, trails or recreational facilities in the target community, this information may be used to propose increased health care services or increased green space, parks and trails as part of redevelopment planning; or,
- Monitoring air, nearby play areas, surrounding soils or surface waters during cleanup, reuse or as part of long term management and stewardship to ensure protection of public health and the environment.

Through 2005, a number of local government grantees have been successful in seeking health monitoring funds as part of their brownfield grant. Over twenty five (25) grants identify specific health monitoring projects or await assessment results to identify appropriate monitoring activities. Examples of proposed activities include:

- Blood lead testing in the target community in collaboration with the city and state lead programs and asthma tracking in school children;
- Examining vital statistics in areas near brownfield sites; and,
- Testing of air and water with health agencies based on assessment results; and,
- Assessing community progress in meeting Healthy People 2010 objectives, national health goals of the Department of Health and Human Services (HHS) that serve as the basis for State and community health plans, as they relate to brownfields communities.

State and tribal brownfield response programs oversee assessment and cleanup activities at the majority of brownfield sites across the country. Monitoring of the health of populations around brownfield sites may be of interest to states and tribes as they establish and enhance their brownfields response programs.



Soil sampling in Louisville, Kentucky.

Health Monitoring A Public Health Practice

The EPA Brownfields program has adapted the Centers for Disease Control and Prevention (CDC) definition of public health monitoring, for the purpose of the brownfields program. Health monitoring under an EPA brownfields grant can be summarized as:

“The collection of health-related qualitative and quantitative data of relevance to brownfield communities and hazardous substance exposures.” (See CDC, for additional information on a definition of public health monitoring)



The Skirvin Hotel in Oklahoma City before renovation.

Health monitoring, as envisioned under a brownfields grant, is a public health practice, not research. There are federal regulations governing research on human subjects. Local government grantees should work with state or tribal health agencies responsible for managing human subject research to ensure compliance with the applicable law.

As a public health practice, local government agencies that are planning to monitor health at brownfield sites will need to work with local and state health agencies and their EPA project officers to define and develop appropriate health monitoring projects as part of their brownfield grant. EPA brownfield grantees should consult with their state health counterparts and institutional review boards if they have questions on the difference between public health practice and research.

Tools and Supporting Organizations

The following list of tools and organizations is not exhaustive but represents a sample of available tools that may help local communities and governments interested in learning more about health monitoring and improving public health as part of brownfields redevelopment.

Healthy People 2010 - Healthy People 2010 provides a framework and a statement of national health objectives designed to identify the most significant preventable threats to health and to establish national goals to reduce these threats. For more information, please see: <http://www.healthypeople.gov/default.htm>

Health Impact Assessment (HIA) - HIA provides decision makers with information about how any policy, program or project may affect the health of people. Please see the EPA Brownfields and CDC website links for additional HIA information.

The Protocol for Assessing Community Excellence in Environmental Health (PACE-EH), is a methodology to guide local communities in identifying and addressing environmental health priorities. It was developed by NACCHO in partnership with the National Center for Environmental Health of the CDC. Please see the "Community-based Environmental Health Assessment" link on the NACCHO website to download resource materials and learn more about PACE-EH projects across the country.

Supporting Organizations

State Health Agencies

Local governments may wish to first contact their state health agencies to find out information about health issues related to brownfields, health monitoring, health impact assessment or other information or technical resources to support brownfields redevelopment to create healthy communities.

Communities interested in brownfields and public health issues in Indian country may wish to contact Tribal Health Agencies or the Indian Health Service.

To learn more about brownfield program activities of the EPA and our partners, please see the following:



Environmental Protection Agency (EPA)

General brownfields program

<http://www.epa.gov/brownfields/>

Information on the public health initiative including grantees conducting health monitoring and links to organizations listed below.

<http://www.epa.gov/brownfields/initiatives.htm>



Agency for Toxic Substances and Disease Registry

Communities and state and local health agencies can seek information or request technical support and assistance from ATSDR staff and their contractors on risk assessment and risk communication, health assessments and health consultations, and other technical support through the ATSDR home page at: <http://www.atsdr.cdc.gov/>



American Planning Association

Resources to support collaboration between land use and transportation planners and public health officials on issues of shared concern, including two major monographs to be published in late 2006: Integrating Planning and Public Health: Tools and Strategies to Create Healthy Places (sponsored by the CDC) and Planning and Designing the Physically Active Community Places (sponsored by the Robert Wood Johnson Foundation). For additional resources, please see the Research section at: <http://www.planning.org>



Centers for Disease Control and Prevention (CDC)

Information on public health practice can be found on the Centers for Disease Control and Prevention (CDC) website: <http://www.cdc.gov/od/ads/opspoll1.htm>. To learn more about the healthy places initiative of the CDC, go to: <http://www.cdc.gov/healthyplaces/>



Environmental Law Institute (ELI)

<http://www.eli.org>

The Brownfields Center of ELI provides valuable information on assessment and cleanup of brownfields as well as tools and models for promoting community health and sustainability through brownfields redevelopment.

<http://www.brownfieldscenter.org/small/about.shtml>



National Association of County and City Health Officials (NACCHO)

Provides resources, tools, and training to support improvements in environmental health and to better integrate local health department officials in the initial stages of land use planning process.

<http://www.naccho.org>



National Association of Local Boards of Health (NALBOH)

Resources that support local boards of health and their efforts to improve environmental health practice and involve health professionals in local land use planning decisions.

<http://www.nalboh.org/>



U.S. Conference of Mayors (USCM)

Provides best practice approaches and resources to support mayors and their staff in advancing efforts to address and redevelop brownfield sites while creating economic opportunities and improving and protecting the environment and public health. <http://www.uscm.org/>

The private non profit organizations listed above are not the only sources of information regarding Brownfields and public health and other organizations may also provide useful information. Please note that these private organizations have their own policies relating to Brownfields cleanup and revitalization and that their views may not necessarily coincide with those of EPA.