

Health Monitoring & Brownfield Grants

Health monitoring activities can help determine potential exposure pathways from on-site or off-site sources.

Local government recipients of an EPA Brownfields Grant are eligible to use up to ten percent of total grant funding for health monitoring activities associated with known hazardous substances contamination at a brownfield site.

Performing health monitoring activities for a hazardous substance-contaminated site will help members of your community understand and address potentially harmful exposures to residents, as well as reassure them when exposures to risks are removed. This public health approach can help shape the planning process for assessing, cleaning up, and reusing a brownfield site.

Health monitoring activities must be conducted in direct partnership with your local, state, or tribal public health agency.

What Types of Health Monitoring Activities are Suitable at a Brownfield Site?

Local government recipients may:

- ▶ Monitor the potential exposure pathways associated with hazardous substances at a brownfield site and determine whether these exposure pathways might result in health impacts.

For example, a local government recipient may map the site perimeter to look at proximity to pathways of potential exposure, including play areas, swimming or fishing areas of local lakes or drinking water sources.

- ▶ Work with local health agencies so they can monitor individuals for exposure to a specific hazardous substance(s) found at a brownfield site.

For example, a local government recipient may provide funding to a public health agency, through a subaward, for health monitoring or work with them to review public health agency data associated with the local population's dermal, inhalation or ingestion exposures to hazardous substances.

Other suitable health monitoring activities will depend on the type of hazardous substances found at the brownfield site, other issues of concern to the community, and whether the site assessment (e.g., Phase II or further site characterization) or cleanup planning is underway.

Photo above: Example of a park at a former brownfield after cleanup of contaminated soil.

What are the Requirements for Conducting Health Monitoring Under an EPA Brownfield Grant?

- ▶ Limited to local government recipients.
- ▶ Confirmed presence of one or more hazardous substances at the brownfield site.
- ▶ Recipients must partner with their designated health agency(ies) to develop and implement appropriate projects.
- ▶ Local health agency(ies) must lead all aspects of the health monitoring project, including project development and implementation in keeping with public health practice (and privacy).
- ▶ Funds for health monitoring activities may not exceed ten percent of the total grant funds awarded by EPA.
- ▶ Funds may be used for analyzing and sharing data results only. Funds may not be used for the design, distribution, or collection of surveys for grant-related activities.

Health Monitoring & Brownfields in Action

Below are two examples of brownfield sites that could benefit from health monitoring activities.

Scenario #1:

The site is an area contaminated with solvents in soils and groundwater due to past dry cleaning and electronics manufacturing. These substances, when present at high levels, can move from contaminated groundwater and soil into indoor air in buildings or outdoor air.

Your community may be concerned about:

Solvents such as trichloroethylene (TCE) and tetrachloroethylene or perchloroethylene (PERC) used as degreasers to clean metal parts, glues and in dry cleaning. TCE is considered a carcinogen while PERC is an irritant to the eyes, nose, mucus membranes and respiratory tract and can damage the liver. When present in soils and groundwater, these solvents can turn into vapors and enter nearby buildings. Nearby residents may worry they have been exposed to contaminants and that cleanup will spread contamination.



Example of a contaminated site.

Consider using a brownfields grant to for the following local health monitoring actions:

- ▶ Conduct continuous environmental monitoring in homes with known exposure pathways after receiving homeowner permission to access the site.
- ▶ Install air monitors on-site prior to and during the cleanup.
- ▶ Examine soil gas risks and utility trenches as part of site cleanup planning.
- ▶ Collect exposure information from residents in high-risk locations.
- ▶ Conduct outreach within the community so they understand the extent of health monitoring activities occurring within their neighborhood.

What you could learn from these local health monitoring actions:

- ▶ Whether individuals are highly exposed and at increased risk.
- ▶ Whether certain individuals do not face increased risks.
- ▶ Whether an active depressurization system is required for new construction and retrofits near the site or utility infrastructure needs monitoring.

Scenario #2:

The site is a downtown waterfront area with co-mingled hazardous substances, fuel contamination, infill and areas of wood treatment near past boat building and maintenance areas. Waterfront and marina areas filled to raise land may have been filled with contaminated soils or incinerator ash wastes (including lead, arsenic, mercury, construction, or demolition debris, chemical wastes, or products from burning). Areas with fuel operations and wood treatment may have gasoline or diesel spill wastes, coal tars, creosotes, and a range of polycyclic aromatic hydrocarbons (PAHs).



Example of a downtown waterfront area.

Your community may be concerned about:

Contamination in recreation and play areas and subsistence foods. Some metals, fuels and PAHs pose risks to development and can cause cancer. Residents that rely on subsistence foods are at increased risk of exposure. Exposure to contaminants by sensitive populations (e.g., pregnant and nursing women, children and teenagers) that may be accessing the site.

Consider using a brownfields grant for the following local health monitoring actions:

- ▶ Look at environmental and health data and exposures with health agencies.
- ▶ Conduct community outreach about the site or area, including actions such as restricting access in hotspot areas for recreation or subsistence shellfish gathering or fishing until cleaned up.
- ▶ Collaborate with health agencies to provide diet diaries and use them to monitor potential exposures of individuals and families that collected or harvested food.

What you could learn from these local health monitoring examples:

- ▶ Which individuals are highly exposed and at increased risk due to their subsistence or recreational activity.
- ▶ Whether certain individuals do not face undue risks.
- ▶ Whether additional health studies are needed.
- ▶ Whether subsistence food sources are safe for consumption following cleanup.