

EPA SUSTAINABLE AND HEALTHY COMMUNITIES RESEARCH PROGRAM

Project 3.61 Contaminated Sites

Summary

Activities focus on providing technical support to the Office of Land and Emergency Management (OLEM) and EPA Regions in order to characterize and clean up contaminated sites.

Technology transfer products will be developed to support remedial project managers and other site management personnel, who then engage communities through the specified procedures.

Results from the research will provide new and improved methods for characterizing and remediating contaminated groundwater, vapors, soils, and sediments to improve public health, community resources, and to facilitate site revitalization.

Because contaminated groundwater is found at 80% of Superfund sites and clean up can take decades to complete, a particular focus of the research is aimed at addressing community water supply issues, including those

related to environmental justice concerns.

Research results will provide tools to determine the temporal and spatial impacts of contaminated sites on community public health, including impacts to community drinking water quality and quantity from contaminated groundwater, soils, and sediments, and the revitalization and reuse of these sites.

Research Approach

Project research and technical support activities, identified through collaboration with the Office of Land and Emergency Management are organized into five tasks:

- 1) Technical Support
- 2) Contaminated Groundwater Research
- 3) Contaminated Sediments Research
- 4) Vapor Intrusion Research
- 5) Tools for Evaluating Spatio-Temporal Impacts of Contaminated Sites on the Environment

Products developed in this research project provide site-specific technical support to facilitate decisions at Superfund, Resource Conservation and Recovery Act (RCRA), and Brownfield sites, and by the Great Lakes National Program Office. They also advance generalized research on hazardous waste site characterization, remediation and site management. Products also facilitate community decisions on water supplies related to Brownfields and Environmental Justice concerns.

The results of the work inform delisting activities and provide technical products that address assessment and remediation that might be necessary for restoration and revitalization.

The exchange of information and ideas between OLEM and the Contaminated Sites Project Team has been ongoing and will continue throughout the life of the project in order to discuss ongoing research and technical support activities,

vet new research and assistance ideas and needs, and adjust to changes in customer priorities to the extent possible.

Outputs

Outputs from this project will provide those working to address and clean up contaminated sites with important products to support their work, including:

- 1) Methods for characterizing and remediating contaminated groundwater, vapors, and sediment sites, impacted with single or multiple contaminants, to improve community public health and their resources and facilitate revitalization.
- 2) Strategies for innovative assessment and remediation of contaminated sites and integrated approaches to remediation, restoration, and revitalization.
- 3) Understanding community exposure to contaminated sites, sediments, and groundwater.
- 4) 2020 Five-year synthesis report on scientific contribution of EPA Office of Research and Development's Technical Support to Superfund and other contaminated sites.

Impacts

These outputs are intended to help managers specifically address contaminated groundwater, contaminated sediment, and vapor intrusion concerns by summarizing practical approaches that the EPA Sustainable and Healthy Communities national research program has developed to characterize, control, and clean up these issues at contaminated sites. They will provide decision makers with the information they need to choose and implement the most effective and affordable remediation, restoration and revitalization strategies for their particular (site-specific) cleanup and revitalization efforts.

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