

EPA’s Sustainable and Healthy Communities Research Overview

EPA’s Sustainable and Healthy Communities (SHC) National Research program provides technical solutions, tools, information, and other resources in three topic areas critical to fulfilling the Agency’s mission to protect the environment and safeguard public health:

1. Contaminated Sites: *Accelerating Clean-Ups*
2. Waste and Materials Management: *Reducing the Burden of Contamination*
3. Healthy and Resilient Communities: *Revitalizing Communities from Contamination and Natural Disasters/Extreme Events.*

SHC is one of six national research programs within EPA’s Office of Research and Development. The SHC research portfolio is highly interdisciplinary and designed to advance the understanding of the links between the environment and public health and human well-being.

Research Topics

Topic 1. Contaminated Sites: *Accelerating Clean-Ups*



Complex environmental problems that can cause human health concerns and degrade ecosystem services persist at many contaminated properties, such as contaminated soil, sediment, surface water, and groundwater. Many of these contaminated sites, including sites containing leaking underground storage tanks, result in solvent or petroleum vapors that can enter buildings, exposing humans to toxic chemicals.

Results will provide data and tools to support Agency and delegated programs that:

- clean up contaminated soils and sediments
- remediate contaminated groundwater
- remediate mining and mineral processing sites
- remediate and characterize solvent vapor intrusion
- remediate contamination from leaking underground storage tanks
- remediate sites impacted by PFAS and lead (Pb)

Topic 2. Waste and Materials Management: *Reducing the Burden of Contamination*



The United States diverts, reuses, and recycles a larger percentage of its solid waste than ever before, yet the use of landfills as a final depository remains a prominent method of waste management. SHC’s waste and materials management research is advancing the Agency’s vision for a new paradigm for integrated materials management that will disrupt the creation and flow of waste. At the same time, researchers are working closely with local communities in the short term to evaluate landfill performance to better protect human health and local ecosystems.

SHC provides data and tools to support Agency and delegated programs that:

- manage waste in municipal and hazardous waste landfills
- use input-output economic models to conduct life-cycle assessments of waste materials
- reuse waste in a beneficial manner

Topic 3. Healthy and Resilient Communities: *Revitalizing Communities from Contamination and Natural Disasters/Extreme Events*



SHC researchers are helping communities help identify their specific environmental challenges and using that knowledge to deliver solutions that have immediate impact. Emphasis is placed on helping the Agency meet its goal to expand the benefits of environmental protection and cleanup so that they reach every American, regardless of life stage (age), income, race, or geography.

The research focuses on advancing the understanding of the causal links between the cleanup of contaminated sites and the benefits rehabilitated and revitalized sites pay in the form of community resilience, public health, and human well-being. The research includes understanding the challenges associated with preparing for and recovering from the impacts of natural disasters and/or extreme weather events, especially when these might result in the release of contaminants from waste storage facilities and other containment sites.

SHC research provides the data and tools needed to:

- assess the benefits from remediation, restoration and revitalization
- address how contaminated sites impact vulnerable communities and groups
- improve the resiliency from contamination, natural disasters, and extreme events
- measure the outcomes of EPA’s environmental protection activities