Hiawatha CARE Project: Fact Sheet
Issue: Soil Contamination

Why is Soil Contamination Important?

Soil contamination may be an issue for properties with a history of industrial or commercial use, including gas stations, dry cleaners, and metal finishing operations. Individual properties may be impacted from lead paint flaking outside houses; arsenic-treated landscape timbers; household chemicals, oils, or paints dumped in yards; or soot from backyard fires and stoves. Contaminants that may be widespread in the urban environment include lead, cadmium, and arsenic.

How Does Soil Contamination Affect Us Locally?

Minneapolis has many older buildings with lead paint that can chip and land in soil. Lead from vehicle exhaust from years ago may still be in the soil. Businesses such as gas stations and dry cleaners found throughout urban neighborhoods create concerns of chemical and tank leaks.

The City of Minneapolis formerly allowed residential trash burning, which could leave harmful substances in the soil.

The arsenic superfund site cleanup in East Phillips and Longfellow resulted in approximately 675 properties having soil and plant material removed and replaced.

Contaminated soil is of particular interest to urban gardeners. Past uses of urban sites may have contaminated the soil, requiring precautions to prevent exposure to harmful substances.

Health Impacts

- Exposure to soil contaminants comes mainly through ingestion of soil and dust.
- Lead poisoning can result in learning disabilities, decreased growth, hyperactivity, impaired hearing, and brain damage.
- Cadmium may affect lungs.
- Arsenic may increase the risk of cancers, among other health affects.

Environmental Impacts

- Heavy metals do not degrade in the environment.
- Heavy metals in soil can be ingested when unwashed and unpeeled vegetables are consumed.
- Heavy metals can be absorbed by plants and animals through the air, soil, or water. Plants can take metals up through their roots, which are then taken up by animals that eat the plants.
- Heavy metals can affect growth and reproduction.

Financial Impacts

- Soil tests for lead, cadmium, and arsenic are relatively inexpensive (less than $100 for all three), but tests for other contaminants can be much more expensive.
- Costs for remediation could include soil and plant material removal and replacement or replacing the source of the pollutant (e.g. windows or exterior paint).

Hiawatha CARE Project Partners

Alexander's Import Auto Repair
American Lung Association of Minnesota
Blue Construction
City of Minneapolis
East Phillips Improvement Coalition
Environmental Justice Advocates of Minnesota
Gardening Matters
Hennepin County
Hennepin - University Partnership
Little Earth of United Tribes
Longfellow Business Association
Longfellow Community Council
Minnehaha Communion Lutheran Church & Longfellow Lutheran parishes
Minnehaha Creek Watershed District
Minnesota Department of Health
Minnesota Pollution Control Agency
Mississippi Watershed Management Org.
Preventing Harm Minnesota
St. James African Methodist Episcopal Church
US Environmental Protection Agency
Women's Environmental Institute

Hiawatha CARE Project - A project of Minnehaha-Hiawatha Community Works

What Can Individuals Do?

- Use the "What's in My Neighborhood" website to determine past uses located on potential garden sites.[1]
- Locate gardens away from building foundations to alleviate risks from lead-based paint.
- Reduce exposure risk by thoroughly washing crops, peeling root crops, and removing outer leaves or bottoms of leafy green crops.
- Make sure young children do not to eat dirt.
- Wash hands immediately after gardening.
- Cover bare soil with mulch or sod.
- Look into raised-bed gardens as an alternative if soil contamination is a concern.
- Do not use railroad ties or treated lumber in your yard or garden.
- Increase the pH of garden soil to limit the amount of contamination taken up by crops.

What Can the Community Do?

- Set up workshops on safe gardening practices.
- Promote community gardens for persons who do not live at sites with clean soil.
- Consider group purchases for raised bed materials, mulch, fencing, etc. to reduce cost.

What Can the City, County, and State Do?

- Continue to provide free mulch from boulevard and park tree trimming.
- Provide fences or hedge barriers to block dust from highways or railroad tracks.

For More Information

Gardening Matters,
www.gardeningmatters.org/sites/default/files/Urban Gardens and Soil Contaminants-A Gardener's Guide to Healthy Soil.pdf

U.S. Environmental Protection Agency,
www.epa.gov/epahome/quickfinder.htm

US Department of Agriculture.
www.aiswcd.org/IUMPDF/appendix/u03.pdf

1 Minnesota Pollution Control Agency, http://www.pca.state.mn.us/index.php/data/whats-in-my-neighborhood/index.html

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What is the CARE Project?

The Hiawatha CARE Project is a new effort to address environmental toxins in western Longfellow and East Phillips. The project brings together two dozen business, community, government, and non-profit agencies in a community-driven effort to identify, prioritize, and address environmental risks in the area.

The project was initiated in December 2010 when Hennepin County received a $100,000 Community Action for a Renewed Environment (CARE) award from the US Environmental Protection Agency. The CARE program supports local collaborations to reduce toxins in the local community.

More Information:
www.minnehaha-hiawatha.com/care
612.348.9344.