

The Legacy of the Manhattan Project in St. Louis: Cancer Concern?

Residents, government face effects of contamination along Coldwater Creek

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Brief History

The St. Louis region played a significant role in the development of America's atomic weapons program in the 1940s.

From 1942 to 1957, the Mallinckrodt Chemical Plant extracted uranium and radium from ore at the St. Louis Downtown Site (SLDS) in north St. Louis. During this time and until 1967, radioactive process byproducts were stored at a 21.7-acre site adjacent to Lambert-St. Louis Airport, which is now referred to as the St. Louis Airport Site (SLAPS). In 1966, certain SLAPS wastes were purchased, moved to and stored at 9170 Latty Ave. in Hazelwood. Part of this property later became known as the Hazelwood Interim Storage Site (HISS). During this move, improper handling and transportation of the contamination caused the spread of materials along haul routes and adjacent vicinity properties.

Environmental Contamination

SLAPS is located at the headwaters of Coldwater Creek, which travels through the middle of north St. Louis County before draining into the Missouri River near its confluence with the Mississippi River. The Latty Avenue site also is located along Coldwater Creek about a mile downstream from SLAPS. This was an open-air storage site and was intended to be so, in order to dry the radioactive material prior to shipping. The original downtown site, HISS and SLAPS were turned over to the U.S. Army Corps of Engineers for cleanup activities, under the government's Formerly Utilized Sites Remedial Action Program (FUSRAP).



Faisal Khan, MBBS, MPH, was appointed director of the St. Louis County Department of Public Health in January 2015. Over the past 17 years, he has worked in Pakistan, Australia, Vietnam, South Africa, Botswana and the United States on a variety of communicable disease control issues. He has directed HIV/AIDS and STD programs in West Virginia and Massachusetts. A SLMMS member, he holds faculty appointments at Saint Louis University School of Public Health and Washington University Institute for Public Health. He can be reached at 314-615-1637, fkhan@stlouisco.com.

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The sites contain soils contaminated with radium, thorium, and uranium as a result of federal defense activities performed under contracts with the Manhattan Engineer District and the Atomic Energy Commission (MED/AEC) in the 1940s and 1950s.

The rapid development of residential subdivisions in the North County area during the 1960s and 1970s completely changed the creek's downstream landscape from sparsely populated farmland to thriving suburban communities. The construction booms in the 1950s and 1960s led to soil re-grading and the process redistributed the contaminant materials (that had been sent downstream by runoff), possibly creating potential modes of human exposure through inhalation and ingestion.

Community Concerns

A cohort of residents who grew up in the Coldwater Creek area in the 1960s and 1970s noticed that a lot of their high school classmates and neighbors were dying of various types of cancer. They created a Facebook page to bring together residents with similar concerns. That page grew to more than 20,000 participants in a year. Admittedly, these are all self-reported conditions. Nonetheless, there are some huge red flags to consider. For example, 30 cases of appendix cancer were identified in a relatively small geographic area when there are less than 1,000 cases nationwide per year. The community is also concerned about many other conditions that may or may not be associated with exposure to contaminants from Coldwater Creek such as leukemia, brain tumors, breast cancer and colon cancer.

Cleanup of Coldwater Creek

The U.S. Army Corps of Engineers, St. Louis District, is conducting a radiological cleanup program for the St. Louis sites under FUSRAP. This program involves extensive and meticulous testing along the banks of the creek as well as its bed and adjoining properties (parks, back yards). Any traces of contamination found are carefully removed with clean margins around the soil. The contaminated material is then removed and shipped for disposal elsewhere. Cleanup in St. Cin Park in Hazelwood, located just north of I-270 along the creek, was conducted this summer. The FUSRAP project website address is shown in "For More Information."

West Lake Landfill

Between 1970 and 1973, most of the material from the Latty Avenue site was transported to Canon City, Co. The remaining 8,700 tons of leached barium sulfate was mixed with 39,000 tons of clean fill and deposited at the West Lake Landfill in Bridgeton as cover. This project remains under the supervision of the U.S. Environmental Protection Agency. The Agency for Toxic Substances and Disease Registry of the U.S. Dept. of Health & Human Services recently released a Health Consultation on the West Lake Landfill describing risk to public health. The report's website address is shown in "For More Information."

What Can Physicians in the St. Louis Region Do?

I would urge all physician colleagues in clinical practice in the St. Louis region to consider the following actions:

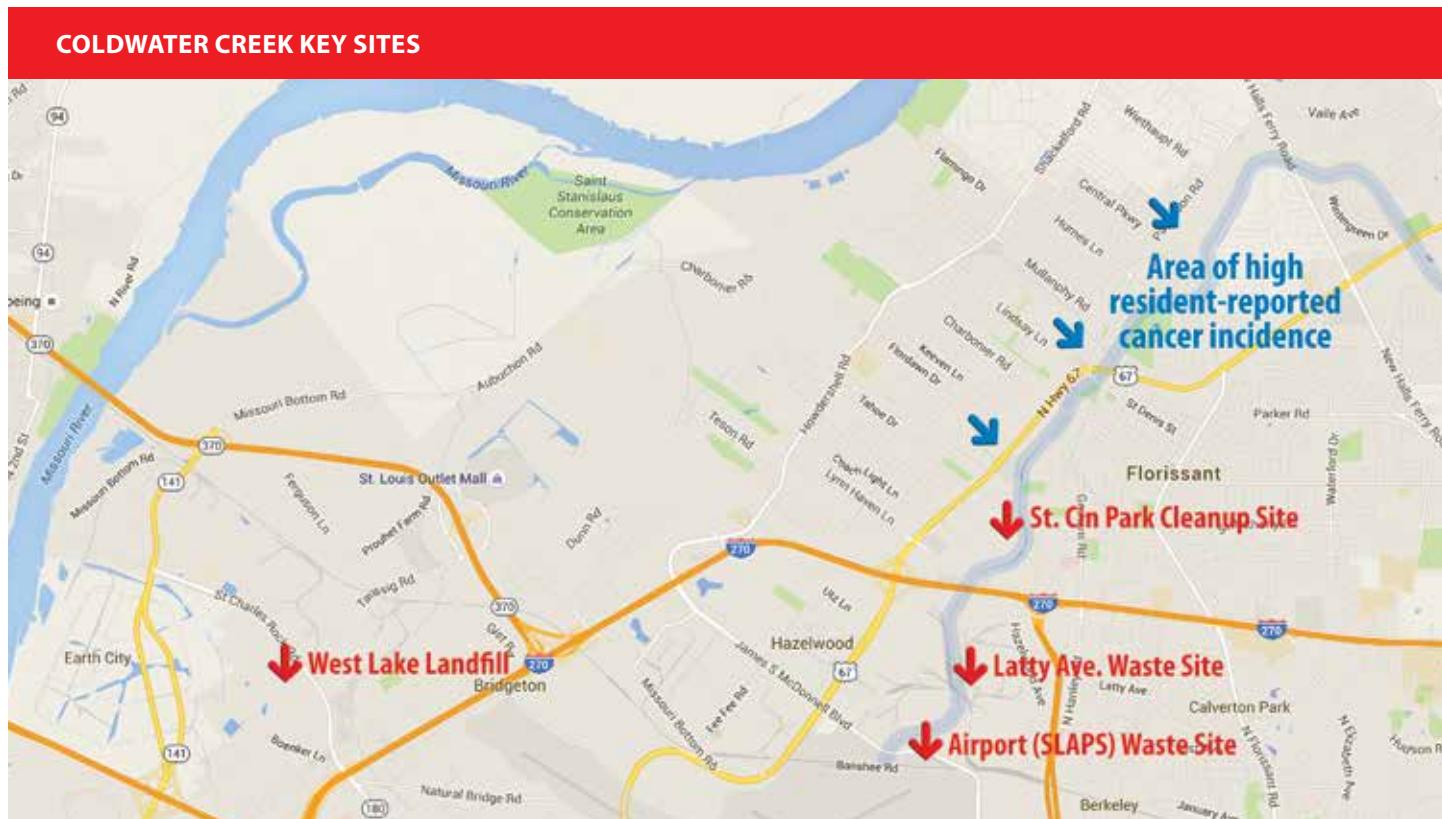
1. **Educate.** Please raise awareness of this issue (for yourself and your colleagues). A good start would be the U.S. Army Corps of Engineers FUSRAP project website. Its address is shown in "For More Information."
2. **Listen.** Please listen to the concerns of any patients who grew up in the area around Coldwater Creek and take the time to reassure them based on your own clinical judgement.
3. **Participate.** Please consider attending a community meeting on this issue to listen first hand to concerns your fellow residents have about their health as it relates to this issue.



Cleanup in St. CIn Park, summer 2015.

For More Information

1. U.S. Army Corps of Engineers, Formerly Utilized Sites Remedial Action Program (FUSRAP), project website.
<http://www.mvs.usace.army.mil/Missions/CentersofExpertise/FormerlyUtilizedSitesRemedialActionProgram.aspx>
2. North County residents' website.
<http://www.coldwatercreekfacts.com>
3. St. Louis Public Radio news story.
<http://news.stlpublicradio.org/post/army-corps-yards-along-coldwater-creek-are-contaminated-radioactive-waste>
4. Health Consultation on the Westlake Landfill, Agency for Toxic Substances and Disease Registry of the U.S. Dept. of Health & Human Services.
http://www3.epa.gov/region07/cleanup/west_lake_landfill/pdf/west-lake-hc-eval-ou1.pdf
5. West Lake Landfill project site. www.westlakelandfill.com



OVERLAY SHOWING PATH OF COLDWATER CREEK