BACKGROUND

- For most of its history, Missouri was the largest lead producer in the U.S., if not the world, and continues to be an important lead producer.
- Lead mining, milling and smelting have resulted in lead pollution in soil, water and sediment at sites located in various areas of the state. This pollution has led to a high rate of elevated blood-lead levels in children, who are the most sensitive population to lead exposure.
- Federal and state Superfund programs and public health agencies have responded to the human health risks at these mining sites by cleaning up residential soil, supplying clean drinking water at sites where drinking water supplies are impacted, issuing fish advisories if necessary, and providing funds for health education.
- The Big River Mine Tailings site is located in a former mining region known as the “Old Lead Belt.” The site comprises eight large areas of mine/mill waste and was listed on the U.S. Environmental Protection Agency’s Superfund National Priorities List (NPL) in October 1992.
- Contamination from the Big River site impacts residential soil and sediment and fish in the Big River and Flat River Creek. Private and public drinking water wells have not been impacted by site contamination.
- In September 2011, EPA published a Record of Decision detailing the cleanup action for residential properties with lead contamination in soil above 400 ppm to be excavation of contaminated soil and replacement with clean backfill and vegetative cover.
- Over 1,000 residential properties have been cleaned up to date and over an estimated 3,000 properties are yet to be sampled.
- For more information about the Big River Mine Tailings site in Missouri you can visit EPA’s website at http://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0701639.

SAMPLING AND CLEANUP

- The Missouri Department of Natural Resources sampled soil at 110 residential properties within one mile of St. Joe State Park and Missouri Mines Historic Site (former Federal Mine pile) in October 2015.
- The sampling involved collecting a small amount of surface soil from several places in residential yards.
- Results from this sampling documented approximately 89% of the 110 residential properties with at least some portion of the yard contaminated with lead above EPA’s health concern level of 400 ppm.
- As of 2018, the department has cleaned up approximately 19 residential yards with contamination levels above 400 ppm. The department began cleanup of a second group of yards in July 2018.
FUTURE ACTIVITIES
♦ If yard soils contain average levels of lead greater than 400 ppm, the department will continue to coordinate with EPA on cleanup activities and contact property owners in the near future.
♦ Property owners or residents are not responsible to pay for cleanup of contaminated soil resulting from former lead mining activities.
♦ A formal access agreement between the property owner and the department will be necessary for future soil cleanup.
♦ The department will meet with each property owner individually to discuss specific cleanup actions for their property.
♦ In general, the top 12 inches of lead-contaminated soil will be excavated, and the excavated area will be filled with clean soil. Contaminated soil will be placed in a designated repository in the local area.
♦ The department’s role in cleanup activities are anticipated to be completed within the next year.
♦ EPA and Doe Run, another responsible party for the site, continue to sample and remediate additional residential properties contaminated with lead. To date, over 4,850 residential properties at the site have been sampled for lead contamination.

HEALTH INFORMATION/BLOOD-LEAD TESTING
♦ Although EPA is concerned primarily with soil lead levels above 400 ppm, lead has no nutritional benefit for humans, and no safe blood-lead level in children or adults has been identified.
♦ All sources of potential lead exposure are important to identify and control. Other possible sources of residential lead exposure include lead-based paint and lead-contaminated dust inside and outside the home, water from older indoor plumbing, some children’s toys and jewelry, dust and debris from remodeling of old homes, and hobbies involving the use of lead such as soldering and working with fishing sinkers or firearm ammunition.
♦ Blood-lead testing for children under seven years old and pregnant women or women planning to have a child is recommended. Your family doctor can conduct this test. You may also contact the St. Francois County Health Center or Missouri Department of Health and Senior Services for more information. Blood lead level testing is available at the St. Francois County Health Center for $15.00.
♦ Children are most at risk for lead poisoning as they may be more likely to be exposed to lead and are more sensitive to its effects than adults. Lead exposure to children may result in lifelong learning disabilities or behavioral problems.
♦ Lead can damage the nervous system, kidneys and reproductive system.
♦ You can reduce lead exposure and its effects by:
  - Avoiding bare soil areas on your property (especially in areas where elevated lead has been detected).
  - Limiting outdoor play to grassy areas of the yard.
  - Washing hands after playing outside and before meals.
  - Vacuuming often and dusting with a damp cloth to help remove dust that may contain lead.
  - Eating a diet high in calcium and iron and low in fat.
**CONTACT INFORMATION**

- For information on the Big River Mine Tailings site or the cleanup please contact:

  **Missouri Department of Natural Resources**  
  **Division of State Parks**  
  **P.O. Box 176**  
  **Jefferson City, MO 65102-0176**  
  573-751-8360 or 800-361-4827  
  **Fred Hicks**  
  Risk Management Specialist  
  fred.hicks@dnr.mo.gov

  **Environmental Protection Agency**  
  **Region 7**  
  **11201 Renner Blvd.**  
  **Lenexa, KS 66219**  
  913-551-7358  
  **Jason Gunter**  
  Project Manager  
  gunter.jason@epa.gov

- For information on the sampling investigation please contact:

  **Missouri Department of Natural Resources**  
  **Superfund Section**  
  **P.O. Box 176**  
  **Jefferson City, MO 65102-0176**  
  573-751-1388 or 800-361-4827  
  **Martin Kator**  
  Chief, Superfund Site Assessment Unit  
  martin.kator@dnr.mo.gov

- For information on health-related questions regarding lead or blood-lead testing please contact:

  **Missouri Department of Health**  
  and Senior Services  
  573-751-6102 or 866-628-9891  
  **Dennis Wambuguh**  
  Chief, Health and Risk Assessment Unit  
  dennis.wambuguh@health.mo.gov

  **St. Francois County Health Center**  
  **1025 W. Main St.**  
  **Park Hills, MO 63601**  
  573-431-1947  
  **Jane Howard, RN**  
  howarj@lpha.mo.gov  
  sfchc.org

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