

Eureka Smelter Lead and Arsenic Cleanup: The Fact Sheet

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- What has been done to remove contaminated soil in the Eureka Townsite
- Your responsibilities as a resident or property owner before you disturb the soil
- Soils Management Plan
- Free blood testing for children
- How to get more information

Cleaning Up Eureka's Mining Legacy

Eureka is considered the birthplace of silver-lead smelting in America. Eureka's boom years lasted from 1870-1885. At the height of activity in 1873, 17 furnaces in eight smelters operated.

Ore processing and smelting activities produced slag waste containing lead and arsenic. Smelter fumes also dispersed lead and arsenic across town carried by the wind. After smelting operations ceased, additional transport of lead

and arsenic to other parts of town occurred as soil and dust continued to be moved by the wind, rainwater and surface runoff, streams and by people excavating soil and slag and moving the material to new places during construction and other development projects.

In 2012 the U.S. Environmental Protection Agency (EPA) and Nevada Division of Environmental Protection (NDEP) sampled soil at more than 100



Source: Eureka Sentinel Museum
Silver-lead smelting put Eureka on the map in the 1870s, but lead and arsenic remain in the soil.

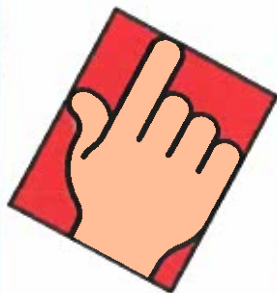
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Blood Tests for Children Offered At Clinic

Lead is particularly dangerous to children because their growing bodies absorb more lead than adults do. Babies and young children can also be more highly exposed to lead because they often put their hands and other objects that can have lead from dust or soil on them into their mouths.

To ensure that children are monitored for expo-

sure to lead in the soil, Eureka County is providing free blood testing for lead at the Eureka Medical Clinic for children age 0-18 who reside in the Townsite of Eureka. The blood test is a simple finger prick. Parents must pick up an authorization form from Public Works before making an appointment at the clinic for the free blood test, available through 2024.



Parents:

The free blood test is a simple finger prick. Pick up the authorization form from Public Works before making an appointment at the Clinic.

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Before You Dig: Soil Handling in the Eureka Townsite



Working with NDEP, Eureka instituted a process to preserve the EPA clean up on 148 properties in Eureka. This process also assists property owners who decided not to participate in EPA's clean-up, but now plan to perform significant excavation or ground disturbance activity on their property and may need to manage contaminated soil. The summary of the soil management process is as follows:

Do not mix soil from below the yellow warning tape with soil from the surface or with clean fill.

Properties Cleaned Up by EPA

If you need to dig below the top one foot clean soil barrier, in other words below the yellow warning tape placed by EPA, you need to make sure any soil from below this depth is returned below the one foot depth when backfilling. If returning the soil you excavated from below the yellow warning tape is not feasible or if you have excess soil to manage following the completion of your work, contact the Public Works Department for more information. The Public Works Department may be able to test the excess soil to find out if it is above the site concentrations for lead and arsenic and recommend a place to dump the soil if necessary. **Please do not mix the soil from below the yellow warning tape with soil from the surface of your yard or any clean fill you might have brought to your property**, as this may potentially contaminate the clean soil and reduce the effectiveness of EPA's cleanup of the property. ☐

Commercial Development of New Residential Properties and Non-Residential/Commercial Development

Notify the Public Works Department prior to beginning any significant excavation and soil disturbance activities. Significant excavation activities are defined as soil disturbance greater than 3 cubic yards. The Public Works Department may be able to test the soil to determine if it exceeds the concentrations of lead and arsenic posing a potential exposure risk and help you determine the best management standards for excavated soil and final cover of the site. ☐

Map of Townsite Available on County Assessor Website

The Eureka County Assessor's Office has added the status map of parcels which have been tested and those cleaned up as a layer to the GIS mapping for Townsite parcels. In addition, the Office has a downloadable PDF of the map.

For more information: <http://www.co.eureka.nv.us/assessor/assessor.htm>



A status map of parcels tested and cleaned up is available on the Assessor's website.

Can You Dig It? Best Practices For Soil Management

Residential Properties Not Cleaned Up by EPA

Please plan to manage the soil you disturb prior to beginning any significant excavation activities. Significant excavation activities are defined as soil disturbance of approximately 3 cubic yards or more. 1 cubic yard = 27 cubic feet. For reference, the box of a standard pickup truck is about 2 cubic yards, so this would be excavations a bit larger than you could fit in a pickup truck.

The focus of the soil management plan is to not increase the magnitude of the lead and arsenic contamination issue by moving contaminated soil to a new location, particularly if the new location is currently a residential property or may be developed into a residential property in the future. **For this reason, the soil you excavate on your property should be kept on your property.** Off-site fill from sources known to be clean, like graded rock or sand and gravel, and results of soil testing showing the lead and arsenic concentrations are below action levels are the criteria required to demonstrate the soil is not contaminated. When completing the backfill activity, the soil needs to be appropriately compacted and graded to reduce erosion and run-off of contaminated soil. Avoid leaving stockpiles of potentially contaminated soil on your property.

The Public Works Department may be able to help determine if the soil on your property has lead and/or arsenic contamination at concentrations that require special handling. If the Public Works Department determines the soil does exceed the concentrations considered as a potential risk, they can provide information about how to manage the soil. They can help you access limited amounts of clean soil which you can use to replace contaminated soil and find an appropriate disposal option for contaminated material you want removed from your property. ▣

Soil Testing Helps To Find Out Soil Contamination Concentrations

Eureka County Public Works Department has purchased a soil analyzer to help residential property owners determine if their soil requires special handling because of concentrations of lead and/or arsenic in the soil. If Public Works determines the soil does exceed concentrations considered as a potential risk, they can provide information about how to manage the soil, and how to access limited amounts of clean soil to replace the contaminated soil, and help find an appropriate disposal option for contaminated material you want removed from your property. If you need to do a bigger excavation project, plan ahead and get your soil tested. Contact Public Works at 775/237-5372.



Plan to manage the soil you disturb prior to beginning any significant excavation activities.



The Thermo Scientific Niton XL5 Alloy Analyzer is a small, light, fast and accurate soil analyzer which may be used by Public Works to test soil.

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residential properties in the Town of Eureka and at the Eureka Public Schools. They shared the results of these soil samples with the individual property owners. The results indicated a number of properties contained lead and arsenic concentrations at levels that could potentially be detrimental to public health, especially to children.

In 2013, EPA offered owners of impacted properties the opportunity to have the contaminated soil removed at no cost to the property owner. They also continued sampling soil at additional homes and properties, increasing the number of sampled properties in Eureka to over 250. The EPA-funded clean-ups focused on properties with soil contamination in excess of 3,000 mg/kg lead or 600 mg/kg arsenic in residential soil. The work generally involved removal of the top one

foot of soil, placement of barrier tape as indication of the remediation, placement of one foot deep clean backfill, and replacement of any landscaping features. The excavated soil was placed in a repository located within Eureka.

NDEP and Eureka County developed an **Institutional Control Plan (ICP)** to initiate safeguards that will assure the clean soil barriers created on properties remain intact and provide a low-cost and simple process to reduce the potential risk that might occur on other properties as a result of future soil disturbance within the Eureka Smelter Site. The ICP includes administrative and legal controls and a plan for sampling and managing soil disturbed in future construction projects. This fact sheet summarizes the tools available to property owners that will be disturbing soil on their property. ☐



Source: EPA

Residential property in Eureka
Townsite after remediation



For More Information

To learn more about the Institutional Control Plan, including the Soils Management Plan and sample Environmental Covenant, find them on the County's website, or at the other sources listed below. The EPA status map of treated Townsite properties is on the Assessor's website.

- Eureka County Website: www.co.eureka.nv.us
- Assessor's Website (Map) : <http://www.co.eureka.nv.us/assessor/assessor.htm>
- Eureka County Public Works Office 775/237-5372
- Eureka County Library, 80 South Monroe St., 775/237-5307
- Eureka County Clerk's Office 775/237-5263