



EPA United States Environmental Protection Agency

Technology Innovation and Field Services Division

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Mining Sites



Characterization, Cleanup, and Revitalization of Mining Sites

This website provides site managers, regulatory agencies, consultants, and the general public with information on technologies and resources related to the assessment, characterization, cleanup, and revitalization of current and former (active, closed, and abandoned¹) mining sites.

MINING SITES SPOTLIGHT

- The [Technology Information News Survey](#), published bimonthly by EPA's Office of Superfund Remediation and Technology Innovation (OSRTI), recently focused on the topic of mining site cleanups. The news survey contains market/commercialization information; reports on demonstrations, feasibility studies and research; and other news relevant to the hazardous waste community.
- Slides and audio for the webinar, [Matching Biochar Characteristics with Metals-Contaminated Soils to Effectively Reduce Metal Bioavailability at Mining Sites](#), have been archived and are available to download.
- EPA has released the technical reference document, [Planning for Response Actions at Abandoned Mines with Underground Workings: Best Practices for Preventing Sudden, Uncontrolled Fluid Mining Waste Releases](#), which recommends applying these best practices, as appropriate, when carrying out EPA-lead activities under the Comprehensive

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Staying Connected



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Mining Webinar Series

- Today's webinar is part of a series
- Visit www.cluin.org/mining/events for updates and links to archived webinars

Archived Internet Seminars, Videos, and Courses

CLU-IN Mining Sites Webinar Series

- **Long-Term Performance of Biochemical Reactors for Passive Treatment of Mine-Impacted Water** (April 23, 2019)
- **Successful Implementation of Biologically-Based Passive Remediation Systems** (May 1, 2018)
- **Ecological Revitalization at the Henry's Knob Former Mining Site** (March 6, 2018)
- **Matching Biochar Characteristics with Metals-Contaminated Soils to Effectively Reduce Metal Bioavailability at Mining Sites** (November 7, 2017)
- **FRTR Presents...Heavy Metals-Mining Site Characterization and Treatment Session 3** (August 10, 2017)
- **FRTR Presents...Heavy Metals-Mining Site Characterization and Treatment Session 2** (July 26, 2017)
- **FRTR Presents...Heavy Metals-Mining Site Characterization and Treatment Session 1** (July 10, 2017)
- **Overview, Lessons Learned and Best Practices Derived from Independent Optimization Reviews of Superfund Mining Sites** (May 24, 2017)

Mining Webinar Series

Considerations for Bulkheading Draining Mine Tunnels

Sponsored by: U.S. EPA, Office of Superfund Remediation and Technology Innovation, Technology Innovation and Field Services Division

Live Webinar: Friday, October 25, 2019, 2:00 PM-4:00 PM EDT (18:00-20:00 GMT)

Description

Presenters

Webinar Slides

Related Links

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Tips

Historically, underground hard rock mines are abandoned after the ore is mined out. Water then seeps into the fractures, mined out veins, and other mine workings where it combines with oxidized minerals to form sulfuric acid which then brings heavy metals into solution which then flows out as acid mine drainage (AMD). The AMD impacts the surrounding streams by providing a steady influx of acidic metal rich water, as well as surges of AMD from the collapse of underground dams where AMD has pooled. Such surges and sometimes all flows can be controlled by installing concrete plugs (bulkheads) in strategic locations. This webinar will address underground bulkheads in general and will present specific examples from Region 8 of bulkhead installations and water quality changes, including those at Dinero Tunnel, Pennsylvania Mines, and Captain Jack Mill sites.

► [Accessibility, Recording, and Content Disclaimer](#)

Meet the Speakers



Christoph M Goss

Deere & Ault Consultants Principal

Dr. Goss holds a BS in Engineering -Civil and a PhD in Mining and Earth Systems Engineering, both from the Colorado School of Mines. As a principal at Deere & Ault Consultants in Longmont, CO, his practice includes tunneling, underground mine design, and underground rehabilitation. Since 2000 he has worked on a variety of abandoned mines and water tunnels, evaluating and designing support rehabilitation and bulkheads.

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Meet the Speakers



Joy Jenkins

EPA Region 8 Remedial Project Manager

Dr. Jenkins is the EPA Region 8 Superfund Remedial Project Manager (RPM) for the Captain Jack Mill and Nelson Tunnel/CWR Sites in Colorado and the Gilt Edge Mine Site in South Dakota. Her work focuses on abandoned mine lands cleanup projects. She worked as a consulting environmental engineer prior to joining EPA in 2010. She completed her Ph.D. in Civil Engineering, Environmental emphasis, at the University of Colorado Boulder working on source control measures to prevent acid rock drainage generation.

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Meet the Speakers



Jeff Graves

Director of the Office of Active and Inactive Mines, Colorado
Division of Reclamation, Mining and Safety, Colorado
Department of Natural Resources

Mr. Graves has been with the State of Colorado for 18 years. He designed and implemented numerous mine reclamation projects for the State of Colorado as a Senior Project Manager. Prior to employment at the State of Colorado, he worked as a staff geologist for 2 geotechnical engineering firms in the Denver area. Mr. Graves has a Bachelors of Science in Geology from the University of Colorado and a Masters of Engineering in Geological Engineering, with an emphasis in groundwater engineering, from the Colorado School of Mines. His interests include mountain biking, backpacking, mining history, American history, and spending time with his family.

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