

Missouri must embrace effective safe mining practices for the health and safety of mining workers, the surrounding communities, and future generations.

Missourians across the state need protection from the harms of mining. Work to minimize the effects on the health and safety of Missourians statewide, especially from silica sand, cobalt, rare earth elements (REEs), lead, and iron.



Health harms of silica sand mining

Crystalline silica is a human carcinogen. Workers are at particular risk given direct and long-term exposure. Respirable crystalline silica can cause major problems when inhaled, including lung-related diseases and kidney disease. Studies show associations between residential proximity to these mining operations and an increase in adverse effects such as risk of pregnancy effects, cancer, hospitalizations and asthma.

Environmental harms of silica sand mining

Mines disrupt the land's structure, natural drainage, depletion of ground water sources, stacking of mine waste, topsoil loss, degraded forests, and harm to aquatic life in nearby waterways.

Harms from Mining Cobalt and REEs

Cobalt - Mining cobalt releases toxic particles that have the potential to cause an assortment of serious health ailments, including cancers, and lung, vision and male reproductive system harm. Cobalt particles at mines enter surface water, leading to degraded water quality and heightened levels of eutrophication.

Rare Earth Elements (REEs) - Processing REEs involves the separation and removal of uranium and thorium, which results in radioactive wastes. Inhalation of REE gases, particularly from yttrium, which is an REE believed to be most prominent in Missouri, can cause lung embolisms, especially with long-term exposure. It can also cause lung cancer and damage to the liver. The wastewater discharge from mining yttrium is particularly concerning as it contains acids, radioactive elements, and heavy metals which have significant impacts on humans, fauna, and flora.

**Protect Missouri's people, economy and environment with
statewide mining protections for multiple minerals.**

Missouri needs greater health and environmental protections for all mining operations in the state, not just those that deal with sandstone for silica sand.

Below are statewide protections we urge you to support:

- **Greater public notice requirements and public engagement opportunities** surrounding permit applications
- **Mining permit requirements for all mines**, not just those mining “non-metallic minerals.”
- **Stronger protections in the mining permit applications** to ensure potential operators assess the health and environmental impacts of their proposed mine, including:
 - Specifics for the conservation plan required pursuant to RSMo. 444.722
 - A hydrogeological evaluation
 - Results from a water resource needs assessment
 - Analysis of short term and long term environmental consequences that cannot be voided
 - Analysis of potential hazards
 - Monitoring plans for air quality, groundwater, and surface water
 - Environmental assessment worksheets for proposed operations mining cobalt, REEs and silica sand.
- **Strong setbacks** from schools, homes, wildlife refuges, surface waters, state parks and conservation areas, and federal parks.
- **Annual reports for all mines** including practices used to minimize health and environmental harm, data from air and water monitoring, volume of greenhouse gas emissions emitted, volume of discharge into waterbodies, and volume and type of minerals mined.
- **Direction to DNR to adopt rules** related to air quality, mine reclamation, and radioactive waste liability at mines involving silica sand, cobalt, REE, iron, and lead.
- **Applicability of Missouri Sunshine Law to complaints regarding mining operations** with personally identifiable information of the complainant redacted.

We must balance the need of mining resources with the long-term harms that workers, communities, and nearby natural areas will feel without greater protections.