

# Evaluation of Community Exposure to PM<sub>10</sub> in Outdoor Air, and Heavy Metals in Outdoor Air, Groundwater, and Surface Soil

Summary of Conclusions and Recommendations  
Cottonwood, AZ | March 2026



## Background

- The Arizona Department of Health Services (ADHS) completed a health consultation in response to requests from the Arizona Department of Environmental Quality (ADEQ) and a petition from a community member.
- ADHS evaluated whether potential environmental exposures in the vicinity of the Minerals Research, Inc. (MRI) facility in Cottonwood could impact the health of nearby residents.
- This report does not identify the source of any environmental conditions. For additional background on ADEQ's evaluation of potential contamination sources, please refer to the Preliminary Investigation Report Addendum found at [azdeq.gov/wqarf\\_PI](https://azdeq.gov/wqarf_PI).

## About the data

### Data Received

- Outdoor air & weather
- Slag pile dust
- Groundwater
- Soil (XRF & laboratory)
- Facility operation information
- Community observations

### Data Review

- Lab certification
- Testing & analytical methods
- Quality assurance & quality control (QA/QC)
- Relevance for exposure evaluation

### Data Used

- Outdoor air: PM10 & 20 metals; weather
- Groundwater: 11 metals
- Surface soil: 17 metals (laboratory only)
- Community observations

## What We Found

**Most environmental exposures evaluated are not expected to cause health concerns. Health risks are limited to specific locations and exposure situations, not the community as a whole.**

### Air

- Breathing outdoor air is not expected to harm healthy individuals.
- Prolonged exposure to particulate matter (PM<sub>10</sub>) during high wind events may affect sensitive individuals (e.g. those with lung or heart conditions) living or recreating north of MRI.

### Soil

- At select locations, incidental ingestion of arsenic or copper in surface soil could harm people's health, specifically young children with soil-pica behavior and those exposed to long-term arsenic in some residential right-of-way (ROW) areas.

### Water

- Public drinking meets EPA standards.
- 2 private wells tested had levels that could affect health with long-term drinking use if the water is untreated.

## Protect your health

### Limit outdoor activity when it's windy

- Check the wind forecast at [weather.gov](https://www.weather.gov).
- Reduce or avoid unnecessary outdoor activities.
- Keep windows and doors closed to limit the dust inside your home.

### If you use a private well

- Private well owners are responsible for testing and treating their own wells.
  - Follow the recommended testing schedule and treatment guidance at [azdhs.gov/WellWater](https://www.azdhs.gov/WellWater).
  - Test for arsenic if you have not already done so, and again at least every 5 years.

### Limit your contact with dust

- Dust is a mixture of substances (ex. pet dander, ash, hair, fabric fiber, rock, soil, or heavy metals).
- Review the "[Arizona is dusty!](#)" fact sheet on our website for specific tips to limit dust exposure.

### For those with children:

- Carefully monitor young children outside. Talk with their doctor if you notice they are eating large amounts of soil while playing.
- Help them properly wash their hands after being outside and before eating.
- Encourage play in areas other than bare soil, like grass, mulch/wood chips, or sandboxes
- Regularly (weekly or when visibly dirty) wash children's toys and items they put in their mouths with soap and water.

## Limitations

### Some data was limited

- Limited time and locations of collected data.
- There was limited and targeted sampling in some areas.

### What this means

- We used protective assumptions when the data were limited in an effort to overestimate risk rather than underestimate.
- There is uncertainty in some of the results. This was considered when making health conclusions and recommendations.
- More data could help reduce uncertainty in the future.

## Next steps

- ADHS will continue to work with the community, local organizations, and state agencies to address concerns, answer questions, and protect public health in Cottonwood.
- You can find the full health consultation report by scanning the QR code or at [azdhs.gov/EnvironmentalToxicology](https://www.azdhs.gov/EnvironmentalToxicology).
- If you have any questions about the report, please contact ADHS at [EnvironmentalToxicology@azdhs.gov](mailto:EnvironmentalToxicology@azdhs.gov).

