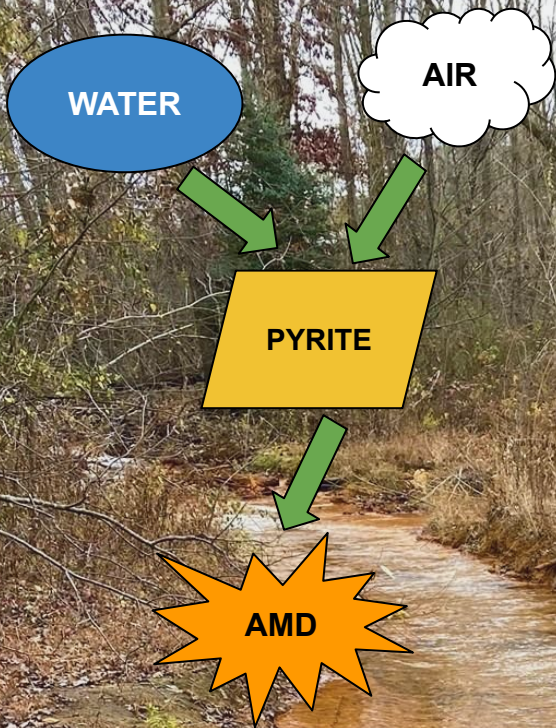


# Acid Mine Drainage (AMD) and Remediation



## What is AMD?

Acid Mine Drainage (AMD) is at its most basic level, water that flows through abandoned coal mines, interacts with the rock inside of mines, and flows from abandoned features (seeps, boreholes, tunnels).

## How does it happen?

Acid Mine Drainage occurs when water and air are exposed to a mineral called Pyrite (Fool's Gold) and undergo a chemical reaction called oxidation. The end result is heavy iron sedimentation at the bottom of our rivers, streams, and tributaries.

AMD really gets on my gills!

# Acid Mine Drainage (AMD) and Remediation



## Are there environmental risks?

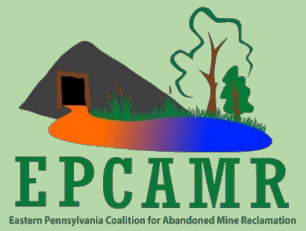
Acid Mine Drainage (AMD) raises the iron levels and pH in streams. When water reacts with rocks and minerals inside of coal mines, they release sulfuric acid and dissolved iron. These two things make it very hard for fish and macroinvertebrates spawn and thrive in streams.

## How can it be fixed?

AMD can be fixed by creating active water treatment systems or passive systems with plants that can help to remove the iron and acid from water over time. AMD will pass through aerators or a series of ponds with plants that allow the iron to settle out and can be harvested or it will adhere to the plant's root systems.

Acid Mine Drainage (AMD) - Sulfide Mining in the Boundary Waters

# Acid Mine Drainage (AMD) and Remediation



## Other pollutants?

Acid Mine Drainage (AMD) raises the iron levels and lowers the pH of streams. Aluminum also occurs in AMD, but creates different issues within the water and is a different color. This handout focuses primarily on iron alone, so aluminum is left out.

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