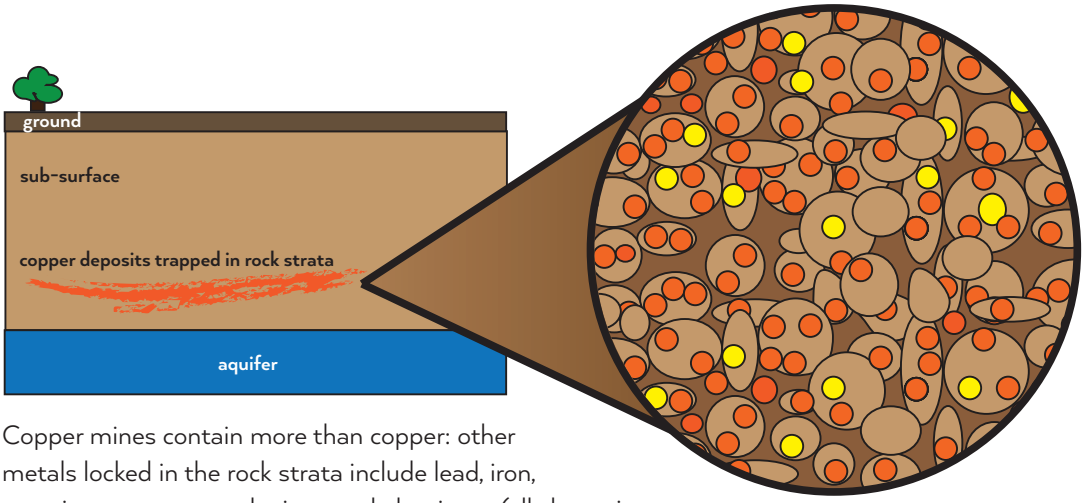
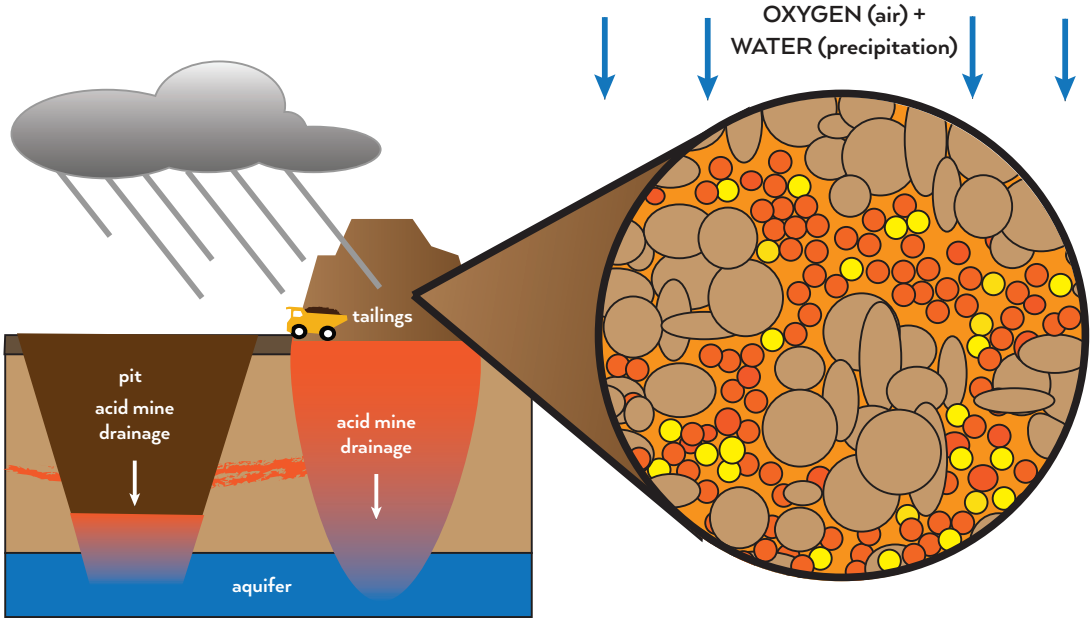
WHAT IS ACID MINE DRAINAGE?



Copper mines contain more than copper: other metals locked in the rock strata include lead, iron, arsenic, manganese, selenium, and aluminum (all shown in orange). The deposits also include sulfides (shown in yellow). [not to scale]

Undisturbed underground, these minerals pose little threat to regional water quality.



Once these minerals are disturbed by mining, however, the chemistry can change drastically. Exposed to oxygen (air) and water (precipitation), sulfides generate sulfuric acid, and dissolve the metals into water. This creates the acidic, metals-laden runoff also called "Acid Mine Drainage" or "AMD". AMD can be of varying colors: iron-rich AMD is often red or orange, while copper-rich AMD is turquoise blue. Once the process begins, it is difficult to stop. [not to scale]