

Name _____

Nitrogen Air Pollution

What are nitrate and ammonium?

Nitrate and ammonium are two molecules that are found in air pollution. Both of them contain nitrogen. Nitrate is nitrogen combined with oxygen and has the chemical symbol NO_3^- . Ammonium is nitrogen combined with hydrogen and has the chemical symbol NH_4^+ .

Where does nitrate come from?

Nitrate comes from nitrogen dioxide or NO_2 , which is a gas that comes from a lot of different sources. NO_2 mainly comes from burning fuel, so sources of NO_2 and nitrate are cars, trucks, power plants, and chemical factories. Nitrate is a main component of acid rain.

Where does ammonium come from?

Ammonium mainly comes from agricultural sources such as manure and fertilizer. You may have heard of ammonia because it is in some cleaning products. Ammonia and ammonium are very similar molecules.

How do nitrate and ammonium affect the Chesapeake Bay?

When nitrate and ammonium get into the Bay through wet and dry deposition, they can add extra nitrogen to the water. This allows more algae to grow, which can cause dead zones that have little to no dissolved oxygen in them. This can kill animals that need dissolved oxygen to survive.

Fill in the Venn diagram below based upon what you know about nitrate and ammonium.

