

What is the difference between smog and fog?

The Difference Between Mist, Fog, Smog, Haze And Vog:

There are a lot of different names for that stuff that causes reduced visibility—and an agonizingly long commute—in the morning. Mist and fog are caused by water droplets in the air, and the only difference is how far you can see. Haze is the reflection of sunlight off air pollution, while smog is what happens when pollution causes low-lying ozone. And vog only happens when a nearby volcano is releasing sulfur dioxide into the air to react with you look out of the window in the morning, and it looks like the clouds have settled in your front yard. There are a couple of different terms to describe this weather phenomenon; some versions of it can be downright deadly.

Mist and fog both occur when there are water droplets in the air. When warm water in the air cools quickly, the droplets change from invisible to visible. When it comes to the airline industry's definition of fog, they use the guidelines of not being able to see more than 1,000 meters (3,280 ft), although the civilian definition of fog is when visibility is less than 200 meters (650 ft). That might not sound like much, but when it comes to your morning commute, a visibility of only 50 meters (165 ft) will slow everyone down enough to cause major delays.

If you can see farther than that, it's considered mist.

There's also a wide variety when it comes to the different types of fog. Radiation fog happens when the temperature is cold and there are no winds. When the land cools, the air become less able to hold moisture and water begins to condense in the air. This is the fog that happens on early winter mornings, which is burned off when the Sun comes out.

Some types of fog only occur over certain geographic formations. Valley fog is, as its name suggests, the fog that fills a valley—it's unique because it can last for several days because of the topographical layout that interferes with its disappearance. Upslope fog happens on hillsides, and coastal fog (unsurprisingly) happens around the coast.

When fog forms ice crystals over surfaces, that's freezing fog. It can be caused by evaporation fog, which happens when cold air passes over warmer water or wet land; it can be contained over areas like backyard swimming pools or hot tubs.

And advection fog happens when wet air moves over a cooler surface and water droplets condense as the air is cooled.

While mist and fog occur when water droplets hang in the air, haze happens when the particles in the air are pollutants. Most of the time, haze occurs in areas far from the original source of the pollutants, which are carried by wind currents to where they ultimately gather. Haze forms when light reflects off airborne pollution particles and interferes with visibility. In some places—like

the eastern United States—haze that's settled over national parks can reduce visibility from as much as 150 kilometers (90 mi) to as little as 25 kilometers (15 mi). Some naturally occurring sources of haze include smoke particles from fires, but the pollutants are more often man-made.

The term "smog" was first coined in the early 20th century in London to describe the low-hanging pollution that covered the city. Smog is the stuff that will make you cough and burn your eyes—that's because it's majorly made up of ozone. When certain pollutants enter the air—like nitrogen oxides—they react with the sunlight to form ozone. It's a good thing when it's high up in the atmosphere, but not so good when we're breathing it. It can cause everything from eye irritation to chronic asthma and can also severely impact the productivity of agricultural areas.

Vog is a specific type of air pollution that comes only from volcanic activity. When a volcano erupts—or begins to erupt—it releases sulfur dioxide which then reacts with the other gases that are already in the air. When lava reaches the sea, it also reacts with the water to produce other chemicals like hydrogen sulfide. The resulting "fog" is called vog and can mean anything from severely reduced visibility to adding a mild, blue-grey tint to the landscape.

Had you goggled it you would get some more definitions to your query.