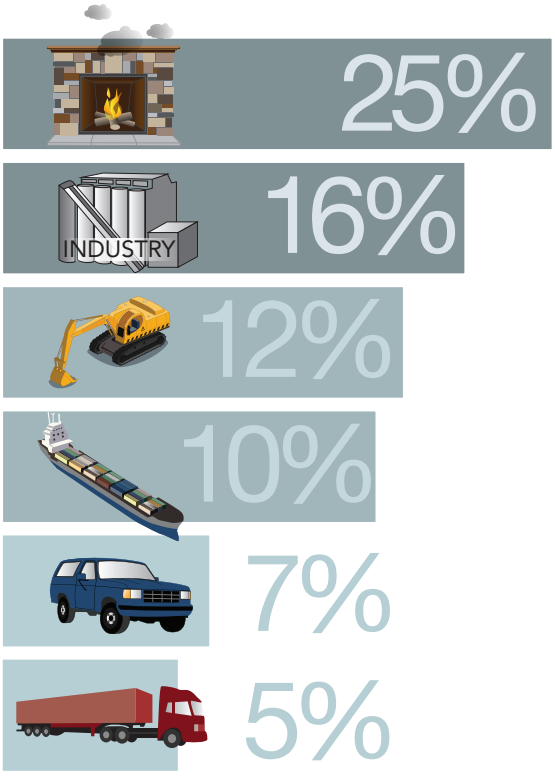
Clear Air BC
BC Visibility Coordinating Committee

EMISSIONS THAT IMPACT VISUAL AIR QUALITY

Haze-causing particles can enter the air in two ways:

PRIMARY PARTICULATE MATTER

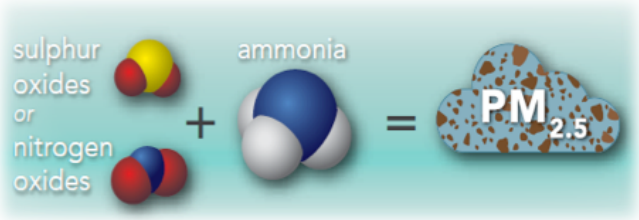
Particles can be released directly into the air from a variety of sources, such as residential wood burning, industry, construction equipment, ships, cars and big trucks. These particles are known as primary particulate matter.



Sources of primary particulate matter in Metro Vancouver and the Fraser Valley Regional District[1]

SECONDARY PARTICULATE MATTER

Particles can be formed by chemical reactions between pollutants like volatile organic compounds, nitrogen oxides, sulphur oxides, and ammonia. Particles that are formed in this way are known as secondary particulate matter.



The formation of one type of secondary particulate matter.

Secondary particulate matter accounts for more than 78% of the haze-causing particles in the Lower Fraser Valley. The following sources emit pollutants that can react to form secondary particulate matter:

CHEMICAL PRODUCTS industrial, commercial, and consumer products such as paints, stains, varnishes, solvents and thinners

CARS AND TRUCKS

CONSTRUCTION EQUIPMENT

SHIPS

OTHER INDUSTRY primary metals and refineries

AGRICULTURE poultry, cattle, pig farming and fertilizer application

To improve visual air quality we must reduce both primary and secondary particulate matter. This means we must reduce the direct release of particles and the release of the nitrogen oxides, sulphur oxides, ammonia and volatile organic compounds that can react to form secondary particulate matter. Although we know the main sources of primary particulate matter, we are still working to fully understand the role that each emission source plays in forming secondary particulate matter.

1 Metro Vancouver, 2013. 2010 Lower Fraser Valley Air Emissions Inventory and Forecast and Backcast. September 2013.