

Air quality in Utah the basics



Wasatch Front

Understanding Utah's air quality issues means understanding the geography and climate in the Salt Lake Valley.

Surrounded by two mountain ranges, the Salt Lake Valley's air can be trapped for days, even weeks at a time. During the winter season, high air pressure causes an inversion of normal temperatures. This means cooler air gets trapped in the valley underneath warmer air, keeping pollutants down in the valley and preventing it from escaping.

Fine particulate matter, also known as $PM_{2.5}$, can be damaging to our health because it's small enough to breathe. In addition to fine particles that are emitted directly, precursors of $PM_{2.5}$ include sulfur dioxide (SO_2), oxides of nitrogen (NO_x) and volatile organic compounds (VOCs).

$PM_{2.5}$ emissions come from three source categories: point sources, such as chemical plants and factories; mobile sources, such as cars and trucks; and area sources, such as small businesses and homes (furnaces, lawn mowers, barbecue grills, etc).

It's not until a storm or heavy wind cools the warmer air above, that the pollution and cold air can escape the valley. Then the whole meteorological process starts over again.

To learn more about what you can do to improve Utah's air quality, **visit: <http://kennecott.com/air-quality>**.

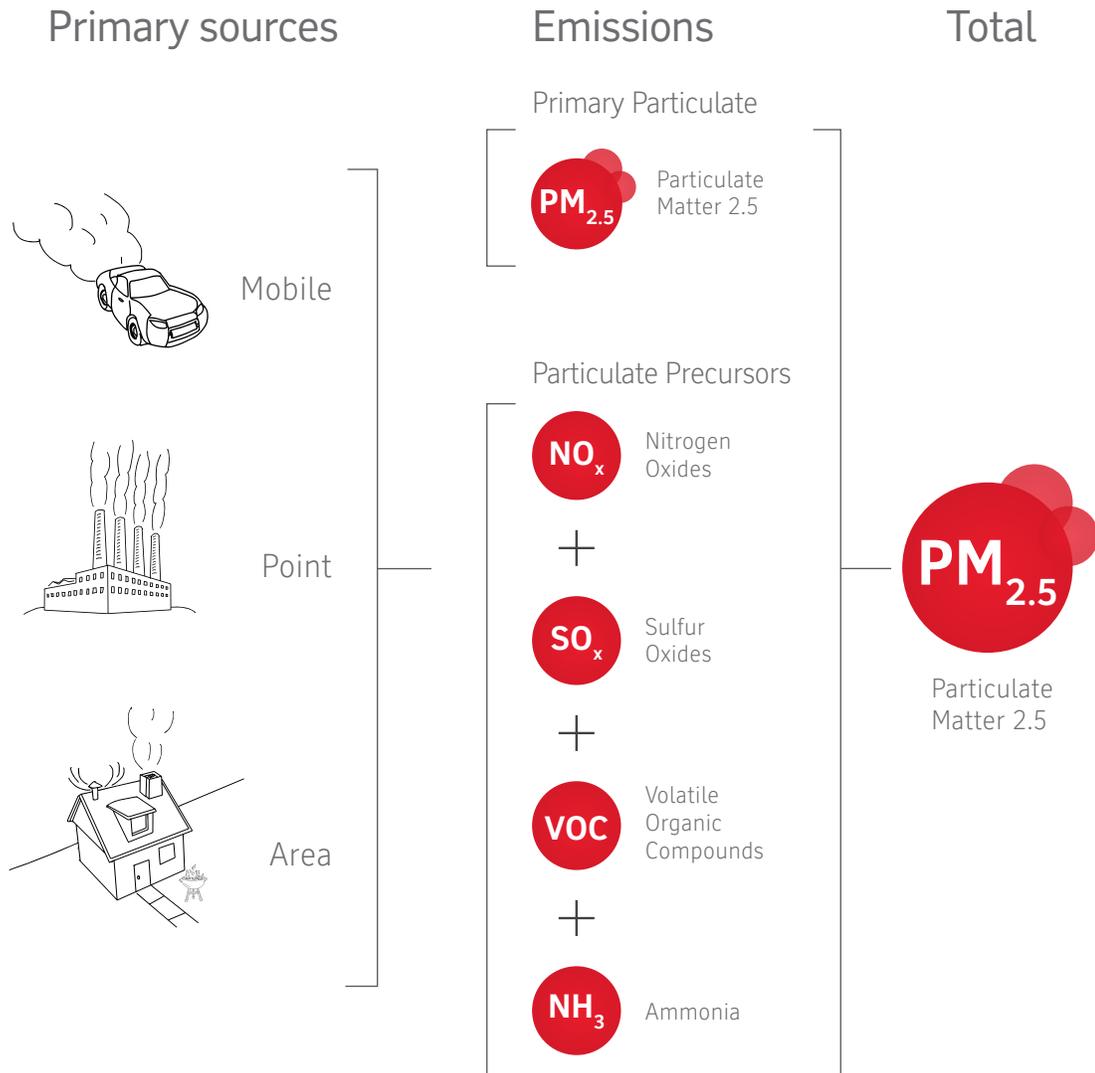


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How particulate matter forms



PM_{2.5} emissions come from three source categories:

1. Mobile sources: cars and trucks
2. Point source: chemical plants and factories
3. Area sources: small businesses and homes (furnaces, lawn mowers, barbeque grills, etc)

Geographical Challenges

- Utah's unique geography and climate affect air quality
- During an inversion, dust and pollutants are trapped in the Salt Lake Valley