

Chapter 12 Section 1 Notes

Primary air pollutants are put directly into the air by human activity

ex) nitrogen oxides; soot from smoke; carbon monoxide; sulfur oxides; VOC's

Sources of primary air pollutants

- Largest producer of primary air pollutants in US comes from electrical energy production
- Oil refineries and gasoline stations are both sources of volatile organic compounds (VOC's).
volatile organic compounds (VOC's) are organic chemicals that form toxic fumes by vaporizing readily

Secondary air pollutants

ex) ground-level ozone

The History of Air Pollution

sea-coal was a source of air pollution before modern times

2 Main sources of air pollution in urban areas are vehicles and industries

Motor Vehicle Emissions

Controlling Vehicle Emissions – catalytic converters help clean car exhaust and control pollution

California Zero-Emission Vehicle (ZEV's) Program – have no emissions from tailpipes or gasoline

Industrial Air Pollution

Regulating Air Pollution from Industry

scrubbers and electrostatic precipitators help industries meet the requirements of the Clean Air Act by controlling pollution

- scrubbers work by dissolving pollutants in water
- electrostatic precipitators work by giving dust particles an electrical charge

Smog – results from chemical reactions involving sunlight, air, exhaust, and ozone

Temperature inversions – atmospheric condition that traps pollution near the ground; happens when warm air above keeps cooler air at the surface from moving upward