Pollutant Concentration and Air Pollution Index

Latest Readings

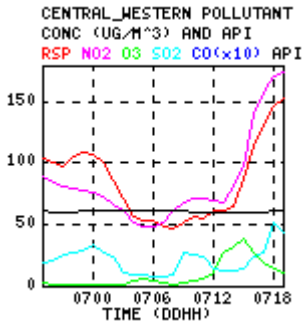
Station	RSP	NO_2	O_3	SO_2	CO	API
	(ug/m^3)					
Central Western	152.9	173.7	11.0	42.7	N/A	62
Kwun Tong	113.5	209.4	5.1	51.9	N/A	70
Tai Po	158.0	169.8	19.2	13.6	N/A	59
Tung Chung	127.8	135.0	14.3	27.2	1138.5	64
Eastern	50.9	133.3	23.5	14.4	N/A	53
Sha Tin	136.2	179.2	2.0	30.9	N/A	60
Tap Mun	42.8	15.0	105.3	10.5	609.5	44
Yuen Long	138.4	146.1	7.6	27.8	1322.5	59
Kwai Chung	153.8	188.0	4.3	35.9	N/A	63
Sham Shui Po	120.9	195.1	1.8	53.2	N/A	65
Tsuen Wan	106.0	171.6	3.5	35.4	1023.5	57
Causeway Bay	154.0	330.1	N/A	49.0	2047.0	137
Central	141.2	254.6	2.9	46.1	1598.5	91

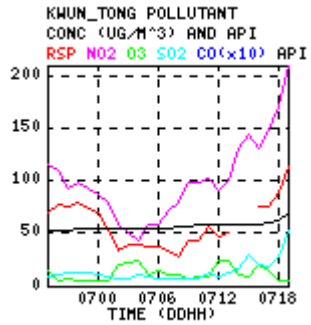
Mong Kok	141.6	269.6	N/A	58.2	1644.5	90

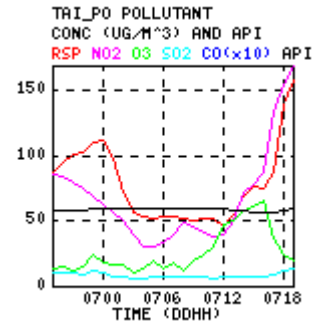
Low	Medium	High	Very High	Severe

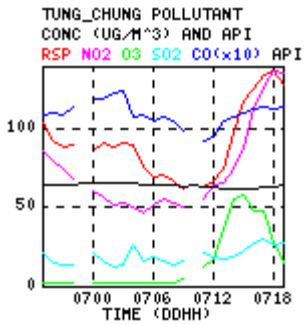
Last update: 2013-01-07 19:00

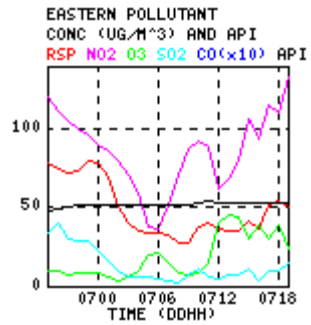
General Stations

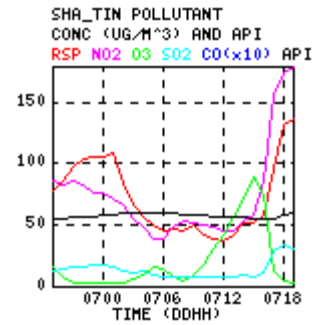


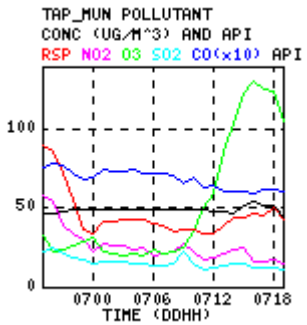


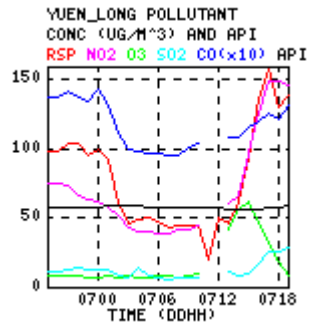


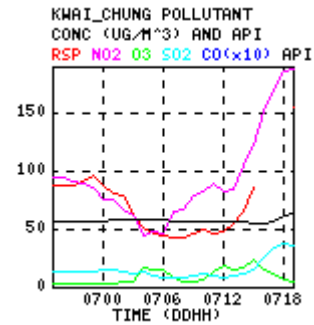


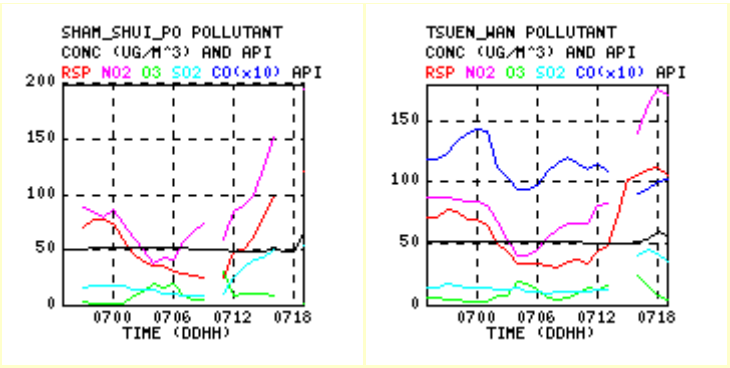




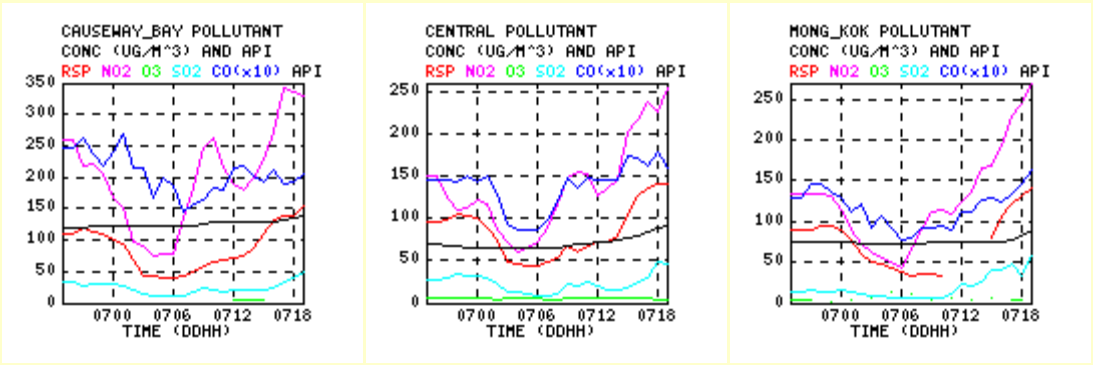








Roadside Stations



Ozone (O3)

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Please see www.epa.gov/airtrends for the latest information on Air Quality Trends.

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Nature and Sources of the Pollutant: Ground-level ozone (the primary constituent of smog) is the most complex, difficult to control, and pervasive of the six principal air pollutants. Unlike other pollutants, ozone is not emitted directly into the air by specific sources. Ozone is created by sunlight acting on NOx and VOC in the air. There are thousands of types of sources of these gases. Some of the common sources include gasoline vapors, chemical solvents, combustion products of fuels, and consumer products. Emissions of NOx and VOC from motor vehicles and stationary sources can be carried hundreds of miles from their origins, and result in high ozone concentrations over very large regions.

Health and Environmental Effects: Scientific evidence indicates that ground-level ozone not only affects people with impaired respiratory systems (such as asthmatics), but healthy adults and children as well. Exposure to ozone for 6 to 7 hours, even at relatively low concentrations, significantly reduces lung function and induces respiratory inflammation in normal, healthy people during periods of moderate exercise. It can be accompanied by symptoms such as chest pain, coughing, nausea, and pulmonary congestion. Recent studies provide evidence of an association between elevated ozone levels and increases in hospital admissions for respiratory problems in several U.S. cities. Results from animal studies indicate that repeated exposure to high levels of ozone for several months or more can produce permanent structural damage in the lungs. EPA's health-based national air quality standard for ozone is currently set at 0.12 ppm (measured as the second daily 1-hour maximum concentration).

NO_x

Main article: NOx NO_x (often written NOx) refers to NO and NO_2. They are produced during combustion, especially at high temperature. These two chemicals are important trace species in Earth's atmosphere. In the troposphere, during daylight, NO reacts with partly oxidized organic species (or the peroxy radical) to form NO_2, which is then photolyzed by sunlight to reform NO:

$$NO + CH_3O_2 \rightarrow NO_2 + CH_3O$$
$$NO_2 + \text{sunlight} \rightarrow NO + O$$

The oxygen atom formed in the second reaction then goes on to form ozone; this series of reactions is the main source of tropospheric ozone. CH_3O_2 is just one example of many partly oxidized organic molecules that can react with NO to form NO_2.

These reactions are rather fast so NO and NO_2 cycle, but the sum of their concentration ([NO] + [NO_2]) tends to remain fairly constant. Because of this cycling, it is convenient to think of the two chemicals as a group; hence the term NO_x. In addition to acting as a main precursor for tropospheric ozone, NO_x is also harmful to human health in its own right. NO_x may react with water to make nitric acid, which may end up in the soil, where it makes nitrate, which is of use to growing plants.

Nitrogen oxide can refer to a binary compound of oxygen and nitrogen, or a mixture of such compounds:

- Nitric oxide, also known as nitrogen monoxide, (NO), nitrogen(II) oxide
- Nitrogen dioxide (NO_2), nitrogen(IV) oxide
- Nitrous oxide (N_2O), nitrogen(-I,III) oxide
- Nitrosylazide (N_4O), nitrogen(-I,0,I,II) oxide
- Nitrate radical (NO_3), nitrogen(VI) oxide
- Dinitrogen trioxide (N_2O_3), nitrogen(II,IV) oxide
- Dinitrogen tetroxide (N_2O_4), nitrogen(IV) oxide
- Dinitrogen pentoxide (N_2O_5), nitrogen(V) oxide
- Trinitramide ($N(NO_2)_3$), nitrogen(0,IV) oxide