



# Environmental Dashboard

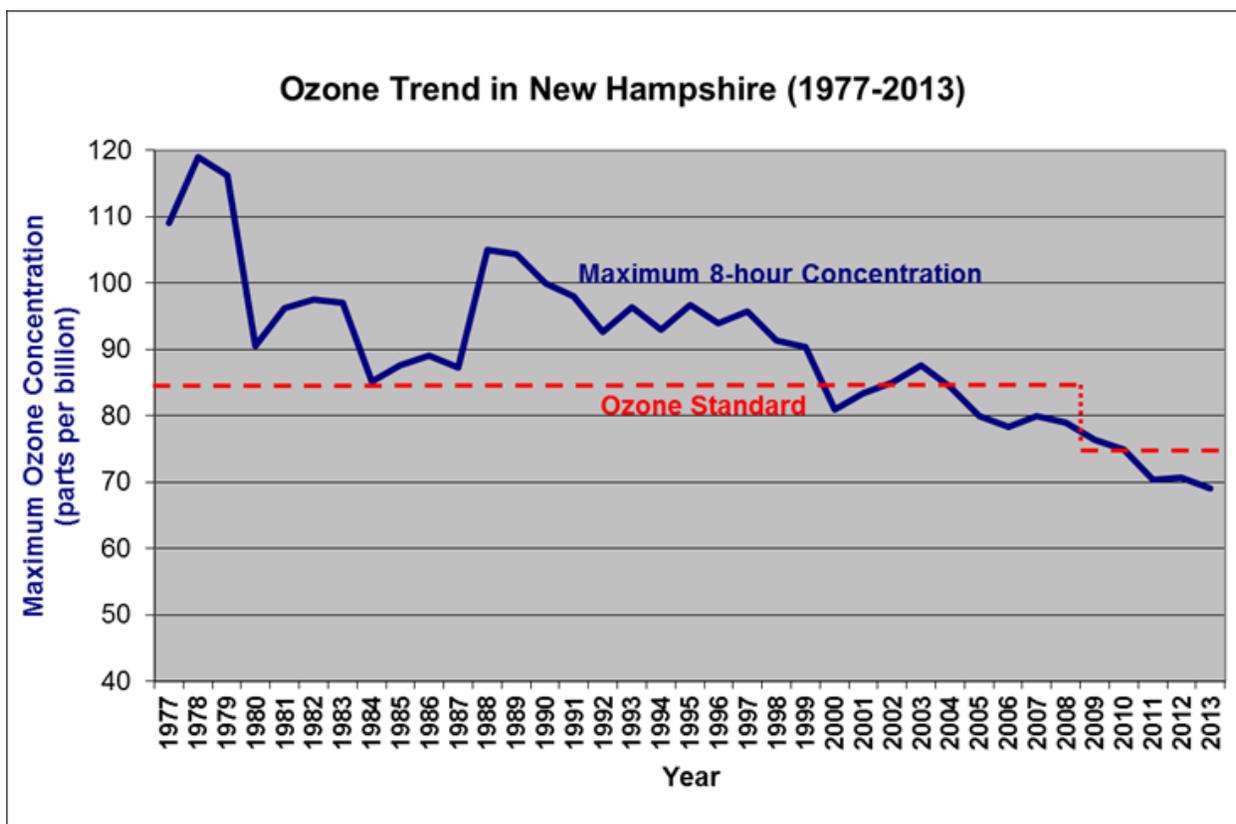


## Trends in New Hampshire's Environment Air Pollution: Ozone

Ground-level ozone contributes to what we typically experience as "smog" and occurs most frequently in the summertime. High ozone levels irritate the respiratory system, aggravate asthma and other chronic lung disease and make it more difficult to breathe. Even relatively low levels of this pollutant can cause adverse health effects, which is why ozone levels are closely monitored. Ground-level ozone is created by chemical reactions between oxides of nitrogen (NO<sub>x</sub>) and volatile organic compounds (VOCs) in the presence of sunlight. Emissions from industrial facilities, electric utilities, motor vehicle exhaust, gasoline vapors and chemical solvents are some of the major sources of NO<sub>x</sub> and VOCs. Ozone can also be transported long distances by wind. For this reason, even rural areas in New Hampshire can experience high ozone levels.

### Current condition

Ozone levels have decreased on a statewide basis since the late 1980s. Currently, 100% of the state is meeting the 2008 ozone National Ambient Air Quality Standard.



SOURCE: DES Air Resources

### **Explanation of Indicator and Trend**

Ozone levels have decreased on a statewide basis since the early 1990s when an amendment to the Clean Air Act required state, regional and federal planning to improve air quality. Ozone formation is directly related to meteorological conditions including sunlight, temperature, wind direction and wind speed. New Hampshire is considered a downwind state; ozone is transported into our state from other states to the south and west. By working cooperatively with regional and national organizations to reduce ozone transported into our state, we have experienced improved air quality. Locally we have reduced our emissions by working directly with businesses and industry. Much of the improved air quality has come as a result of reduced pollution emissions from power plants and large industry, cleaner car and truck fleets, cleaner fuels, and reduced volatility of solvent-based products. Reducing ozone levels is good for people in general, but particularly for people with lung disease, children, older adults, and people who are active outdoors.

### **How does DES Address This?**

DES has an air pollution monitoring network spread out across the state. There are 11 air monitoring stations that collect data on ozone concentrations. When ozone levels are predicted to be high in any part of the state, DES declares air quality action days to advise people of the possible threat to their health.

To address ozone pollution, DES works locally, regionally and nationally to reduce the emissions of pollutants that form ozone. By working with regional and national organizations, DES helps to reduce the amount of ozone-forming pollutants that are transported into our state from outside the region. Through our pollution reduction efforts with New Hampshire businesses and industry, DES helps to reduce the generation of in-state ozone forming pollutants.

Ozone standards are set by the EPA. In 2008 the standard was lowered to better protect human health. The Clean Air Act requires EPA to periodically review standards. If the standard were to be lowered again, New Hampshire could be out of compliance with the new standard. If New Hampshire were out of compliance, EPA would likely impose stricter controls on industrial facilities and additional planning requirements on transportation projects. For these reasons, DES continues to work on the reduction of ozone forming pollutants.

### **For More Information, Including What You Can Do to Help**

DES Ozone Program

<http://www.des.state.nh.us/organization/divisions/air/do/asab/ozone/index.htm>

Current Ozone Levels in New Hampshire <http://www2.des.state.nh.us/airdata/>

DES Air Pollution Forecast for New Hampshire

[http://www2.des.state.nh.us/airdata/air\\_quality\\_forecast.asp](http://www2.des.state.nh.us/airdata/air_quality_forecast.asp)

Smog and Ground Level Ozone, (DES Fact Sheet ARD-13)

<http://www.des.state.nh.us/organization/commissioner/pip/factsheets/ard/documents/ard-13.pdf>

Air Quality Information in New Hampshire (DES Fact Sheet ARD-16)

<http://www.des.state.nh.us/organization/commissioner/pip/factsheets/ard/documents/ard-16.pdf>

Ground Level Ozone, USEPA <http://www.epa.gov/air/ozonepollution/>

Health Effects of Ozone, USEPA <http://www.epa.gov/air/ozonepollution/health.html>