

*City of Aspen
Environmental Health
Department*

*2009
Annual Air Quality
and Temperature Report
for the City of Aspen*

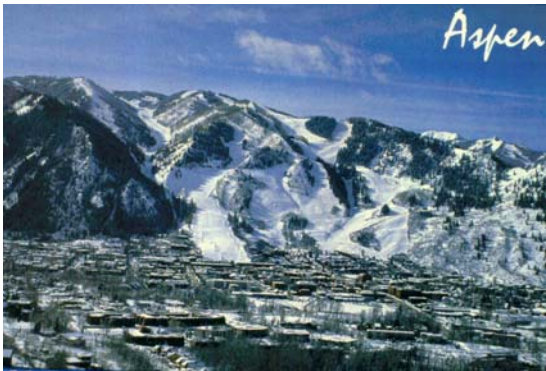


Photo courtesy of Jill Uris

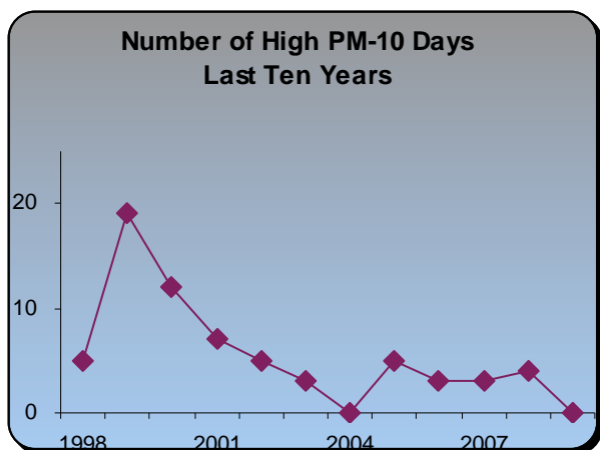
- **Air Pollution Monitoring Results**
- **Temperature Monitoring Results**
- **Trend Illustrations**
- **Comparisons with Previous Years**



THE CITY OF ASPEN

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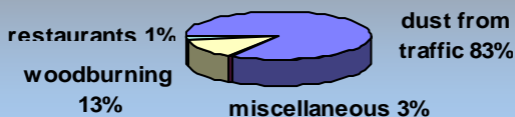
Number of Relatively High PM-10 Days Per Year



“PM-10” is small particulate air pollution including dirt, dust and smoke. PM-10 levels like those Aspen experiences several times a year are associated with:

- **Increased hospital admissions**
- **Greater illness rates**
- **Increased death rates**

Sources of Aspen's PM-10



Virtually all of Aspen's PM-10 is caused by traffic. 83 percent of Aspen's PM-10 pollution comes from dirt kicked up by traffic driving on sanded or dirty roads. Additional PM-10 comes from woodturning, restaurant grills, and vehicle exhaust.

Smog in Aspen winter of 2008-2009



PM-10 Levels Follow Traffic Levels

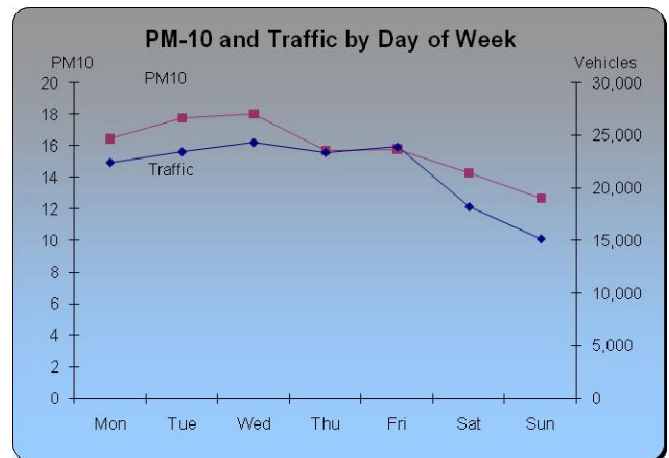
To reduce PM-10 levels, the City of Aspen has taken several steps in recent years to encourage bus use, carpooling and other measures.

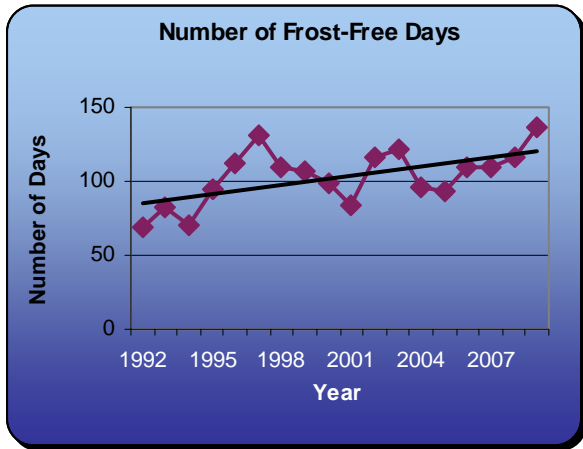
- New slip lane that lets buses drive quickly out of town in the afternoons, avoiding traffic jams
- Voter-approved new bus lane from Buttermilk to the roundabout, making it even easier for buses to get in and out of town quickly
- Increased valley bus service
- Paid parking which helps fund free in-town buses with frequent service
- New Burlingame route
- Affordable housing close to town
- Construction dust control

The PM-10 caused by traffic can only be lowered by trip reduction measures like carpooling, bus rapid transit systems, light rail and/or telecommuting.

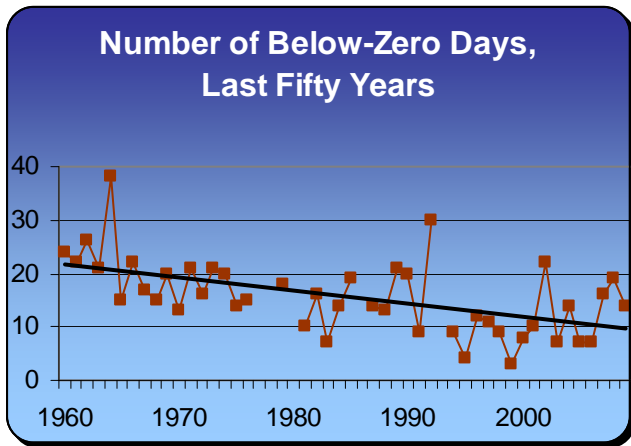
With up to 37,000 vehicle trips each day on Main St., Aspen has a very difficult challenge:

PM-10 harms peoples' health and without reducing Aspen's high traffic levels, PM-10 levels will continue to be high. **Update graph**





Aspen's official summer ("frost-free period") used to be 73 days. This graph shows how much longer Aspen's summers have become. The frost-free period has been increasing at the astonishing rate of 21 days per decade.



This graph shows the number of below-zero days by year, which has dropped 12 days over the last 50 years. The number of moderately-cold days (below 20 at night) has also dropped and the average overnight low temperatures are getting warmer.

- Spring (last freeze) comes earlier each year (10 days in the last 50 years).
- Fall (first freeze) arrives 19 days later than fifty years ago.
- **2009 set an all-time record for the earliest end to winter and the longest summer. The last freeze was on May 9 and there were 136 days in summer without a freeze—compared to the historic 73-day frost-free period.**

The number of cold days influences the length of the ski season, ability to make snow and how long ski areas can stay open.

Global Warming and Aspen

Aspen's Climate Impact Assessment found that:

- If global emissions continue their rapid rise, Aspen is projected to warm 14°F by the end of this century, giving it a similar climate to that of Amarillo, Texas. This year, scientists noted that global emissions are growing faster than earlier predicted.
- If global greenhouse gas emissions are reduced moderately, Aspen is still projected to experience about 6°F of additional warming by 2100, giving it a similar climate to that of Los Alamos, NM.
- In the last 25 years, average temperatures have risen and precipitation has decreased.
- Precipitation will fall more as rain than snow. In the last 25 years, the amount of precipitation falling as snow has decreased 18 percent (the average number of frost free days per year has increased about 20 days).
- Continued growth in global greenhouse gas emissions is projected to end skiing in Aspen by 2100 and possibly well before then. If global emissions are reduced in time, skiing could be preserved at middle and upper elevations.

For information on the city of Aspen's global warming program, the Canary Initiative, go to canaryinitiative.com