

*City of Aspen  
Environmental Health  
Department*

*2010  
Annual Air Quality  
and Temperature Report  
for the City of Aspen*

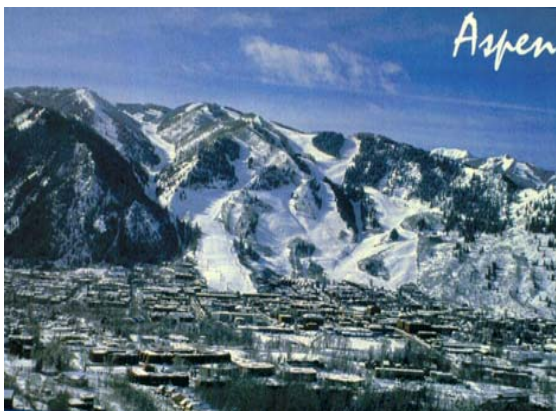


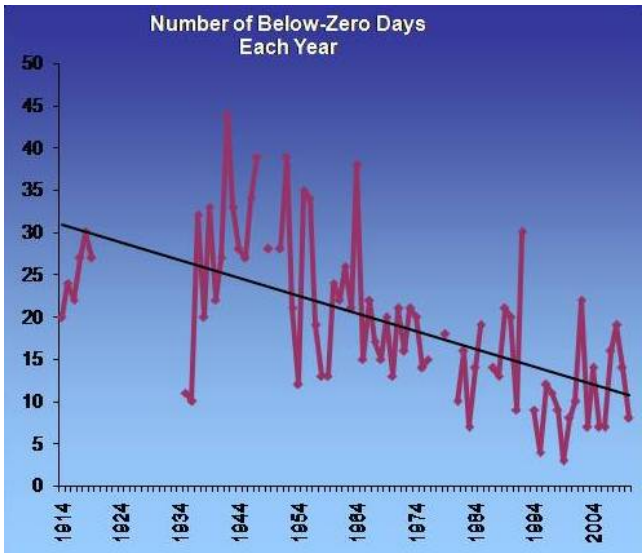
Photo courtesy of Jill Uris

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

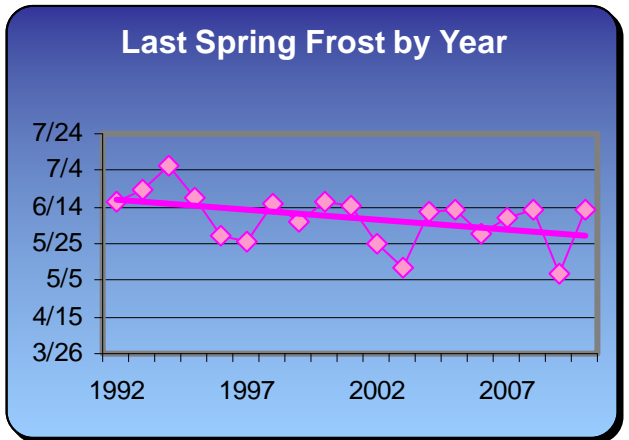


THE CITY OF ASPEN

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The number of very cold days has been dropping — over 20 below-zero days fifty years ago, to fewer than ten now. Aspen’s official summer (“frost-free period”) used to be 73 days. Now it is 144 days. The graph below shows how much earlier Aspen’s springs have become.



- Spring (last freeze) comes earlier each year (about 10 days earlier over the last fifty years).
- Fall (first freeze) arrives two weeks later than fifty years ago.
- **Summers have been getting longer by more than three weeks over the last fifty years.**

**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. December's very unusual rain is consistent with those predictions.
- The report found that 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](http://canaryinitiative.com)**

## Ozone in Aspen

Aspen started monitoring ozone levels in late 2009. Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, asthma and reduce exercise performance. Aspen has had ten days when the 8-hour average for ozone was at or above 60 ppb. To date our highest 8-hour average is 66 ppb. The current federal standard is 75 ppb but the EPA is planning to change the standard, based on newer scientific studies, to somewhere in the range of 60-70 ppb. Ozone is a regional pollutant that forms from distant natural gas drilling and production and regional traffic.

## PM-10 in Aspen



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

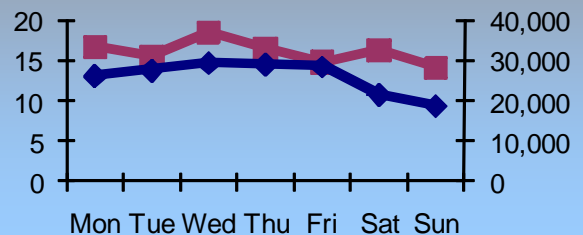
With up to 37,000 vehicle trips each day on Main St., Aspen has a very difficult challenge:

PM-10 harms peoples' health and without reducing Aspen's high traffic levels, PM-10 levels will continue to be high. This graph shows how **PM-10 levels** (pink) follow **traffic levels** (blue). Unusual dust events on Saturday and Wednesday partly hid the connection.

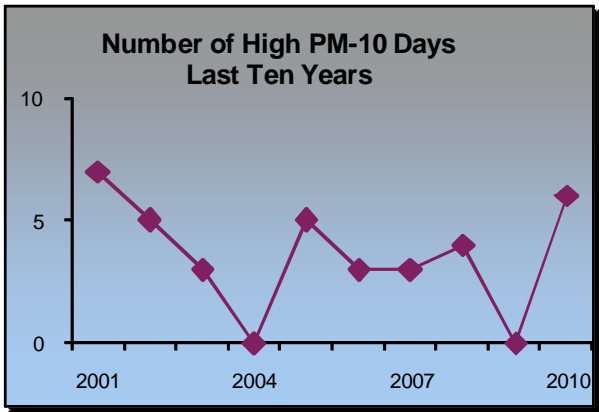
To reduce PM-10 levels, the City of Aspen has taken several steps in recent years to encourage bus use, carpooling and other measures.

- New in-town slip lane and voter-approved bus lane from Buttermilk to the roundabout, making it easier for buses to get in and out of town quickly and avoid traffic jams
- Increased valley bus service
- Paid parking which helps fund free in-town buses with frequent service

### PM-10 and Traffic by Day of Week

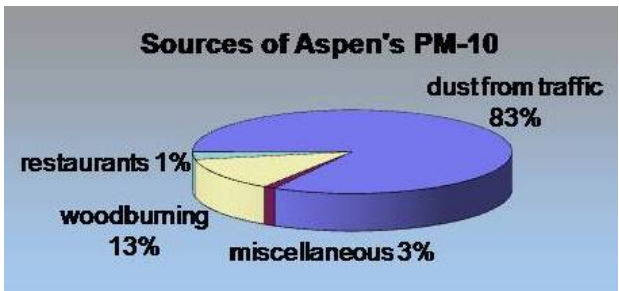


## Number of Relatively High PM-10 Days Per Year



“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



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. In 2010, Aspen's highest PM-10 day was associated with an unusual dust storm.