



**FORSYTH COUNTY  
OFFICE OF ENVIRONMENTAL ASSISTANCE AND PROTECTION**

# ***POLLEN***

## **WHAT IS POLLEN?**

Pollen is typically a dust-like powder discharged from pollen cones or from the male part of a flower. Pollen grains contain the male reproductive cells of a plant. Grasses, trees and weeds are examples of plants that produce pollen. Pollen is essential for reproduction in these plants. Most pollen grains are smaller than 80 microns which is about the width of a human hair.

Some pollens cause allergic reactions in some people. Pollen allergies are specific to the individual and the pollen type. Pollen grains that are wind-dispersed cause most of the allergy problems because these are the pollens that make their way into our nasal passages and eyes. Pollens from other plants, such as roses and tulips, are too big to be transported by the air alone. They depend on insects and sometimes other animals to carry the pollen from plant to plant.



Most pollens are roughly spherical in shape and symmetrical. Some have dimples that extend into or out of the main body, and these dimples vary in number from species to species. Grass pollens have one pore, but some weeds can have three or more. Other pollens such as ragweed, which bothers many people, appear to have spikes or other similar features.

## **HOW IS POLLEN MEASURED?**

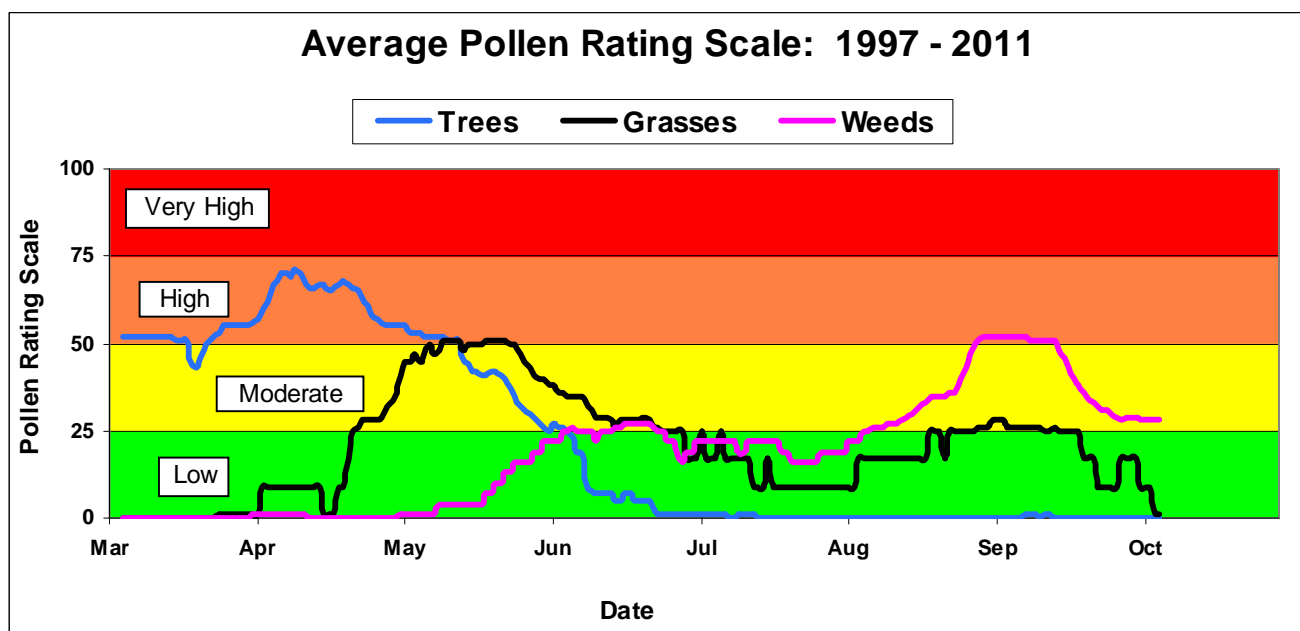
Our pollen monitoring is done using a "Rotorod" pollen sampler every weekday from 3:00 a.m. to 2:00 p.m. during our local pollen season - typically late-February through late-October. The sampler is located at the Forsyth County Government Center building in downtown Winston-Salem.



The pollen sampler is equipped with a motor that rapidly spins a mechanism holding two sampling rods. As the device spins, the spring-loaded rods swing out and come in contact with the air and with pollen in the air. This exposes the plastic rods to pollen during sampling but protects them while the sampler is at rest. The rods are coated with silicon grease to trap the pollen grains. The pollen-laden rods are collected and stained pinkish red with "Calberla's Stain" so the pollen is easier to identify and count under a microscope. After the pollens are counted and identified, the results are reported to the media, area physicians and the general public. The daily pollen count and forecast are also posted on our website: [http://www.forsyth.cc/EAP/pollen\\_report.aspx](http://www.forsyth.cc/EAP/pollen_report.aspx). The pollen grains are identified as trees, grasses or weeds. For each of these pollen types, the pollen concentration is categorized as being either ABSENT, LOW, MODERATE, HIGH or VERY HIGH. This pollen reporting system was adopted from the American Academy of Allergy, Asthma and Immunology (AAAAI).

### SEASONAL EFFECTS

Our local pollen season normally begins when cedar pollen first appears in response to warming temperatures in late February. Oak pollen peaks in April, resulting in the highest pollen densities of the year. Maple, pine and birch pollen are also plentiful during our tree pollen season which ends in early June. Grass pollen is most prominent in May and continues into September. Weed pollen quantities increase throughout May and into June. During July, overall pollen levels are usually low. Ragweed pollen is very significant from late August through mid-September. The first hard frost of autumn typically brings our pollen season to a close in late October.



### WEATHER EFFECTS

Seasonal weather patterns affect how much pollen a plant produces. In addition, daily weather can strongly influence pollen levels. On days that are hot, dry and windy, pollen is dispersed in greater quantities and stays suspended in the air longer. This increases the suffering of those allergic to the pollen. Rainy and windless days tend to lessen the pollen distribution in the air and lessen the effect of pollen on human health.