



Department of Health and Social Services  
Valerie J. Davidson, Commissioner

Division of Public Health  
Jay C. Butler, MD, Chief Medical Officer  
and Director

Editors:  
Joe McLaughlin, MD, MPH  
Louisa Castrodale, DVM, MPH

3601 C Street, Suite 540  
Anchorage, AK 99503 <http://dhss.alaska.gov/dph/Epi>

Local (907) 269-8000  
24 Hour Emergency 1-800-478-0084

Bulletin No. 10 April 18, 2017

## Pollen and Outdoor Mold Season Update

### Background

Allergies from pollen and mold affect approximately 10% to 30% of the population, causing a wide range of symptoms, including red and itchy eyes, runny nose, sneezing, coughing, and asthma exacerbations.<sup>1</sup> The annual healthcare costs due to allergies in the U.S. are estimated to exceed \$18 billion.<sup>2</sup> In 2014 and 2016, Anchorage and Fairbanks reported some of the highest tree pollen counts in the world.<sup>3,4</sup> In Alaska, pollen season typically occurs during May–August and mold season typically occurs during July–September; however, pollen and mold seasons may be lengthening due to climate change.<sup>5</sup> The purpose of this *Bulletin* is to raise awareness about the upcoming allergy season and to offer resources for allergy sufferers on how to reduce their exposure and symptoms.

### Methods

Two pollen counting programs exist in Alaska—one in Anchorage and one in Fairbanks. The Anchorage pollen count is currently conducted collaboratively by the University of Alaska and the Allergy, Asthma and Immunology Center of Alaska using a Burkhard spore trap;<sup>6</sup> the counts occur twice per week during the allergy season. Prior to 2016, the Municipality of Anchorage conducted the Anchorage pollen count for 6 years (2010–2015). The Fairbanks pollen count has been conducted by the Tanana Valley Clinic since 2000 using a Rotorod sampler;<sup>7</sup> the counts occur 2–5 times per week during the allergy season.

### 2015 Pollen and Mold Spore Counts

In 2015, birch, alder, cottonwood, spruce, and willow pollen counts were highest in late April–June; grass pollen counts were highest from late May–July; weed pollen counts were highest during June–August; and outdoor mold spore counts were highest during late July–September (Figures 1 and 2). The 2016 data were not presented here because mold was not counted in Anchorage in 2016.

### Discussion

While annual pollen and mold spore count trends in Anchorage and Fairbanks generally follow the temporal patterns depicted in Figures 1 and 2, weather and other factors can affect the timing and abundance of their release. For example, mild

winters can lead to earlier peaks in tree pollen in May, while rainy summers generally lead to higher mold counts, but lower pollen counts. In contrast, dry, windy days tend to produce the highest pollen counts. Persons living in Anchorage or Fairbanks can check their local pollen counts online.<sup>8,9</sup> Alaskans living outside of these cities can also use these resources to get a general sense for what might be happening in their region of the state.

Allergy sufferers should consult their health care provider about the available allergy medicines such as anti-histamines, decongestants, nasal steroids, leukotriene receptor antagonists, cromolyn sodium, and immunotherapy (i.e., subcutaneous allergy shots or sublingual tablets). Strategies to consider for reducing exposure to pollen and outdoor mold spores include the following: keep windows closed and use an indoor high-efficiency particulate air (HEPA) filter, vacuum floors regularly using a vacuum cleaner with a HEPA filter, change clothes after spending time outside, shower before going to bed, wash bedding weekly, avoid drying clothes outside, wear sunglasses and a hat while outside (to keep pollen out of eyes and hair), limit close contact with outdoor pets, limit outdoor activities, and start taking allergy medicine before pollen season begins.

### References

1. World Allergy Organization, WAO White Book on Allergy, 2013.
2. CDC. Allergies homepage. Available at: <https://www.cdc.gov/healthcommunication/ToolsTemplates/EntertainmentEd/Tips/Allergies.html>
3. Seattle Times Staff. Anchorage getting some of the highest pollen counts in the world. *Seattle Times*. May 12, 2014.
4. Bohman A. Achoo! Birch Pollen Count in Fairbanks Breaks Record. *Fairbanks Daily News-Miner*. May 2, 2016.
5. Schmidt CW. Pollen Overload, Seasonal Allergies in a Changing Climate. *Environ Health Perspect* 2016;124(4):A70-5.
6. Municipality of Anchorage: <https://www.muni.org/Departments/health/Admin/environment/AirQ/Documents/Pollwn%202010/7%2022%20How%20is%20pollen%20sampled%20in%20Anchorage.pdf>
7. Crisp HC et al. A side-by-side comparison of Rotorod and Burkard pollen and spore collections. *Ann Allergy Asthma Immunol*. 2013;111(2):118-25.
8. Allergy, Asthma and Immunology Center of Alaska Pollen & Air Quality. Available at: <http://www.allergyalaska.com/pollen-air-quality>
9. Tanana Valley Clinic Allergy Information. Available at: [https://www.foundationhealth.org/tvc/for\\_our\\_patients/pollen\\_count](https://www.foundationhealth.org/tvc/for_our_patients/pollen_count)

Figure 1. Pollen Grain and Mold Spore Counts — Anchorage, April 21 through September 22, 2015

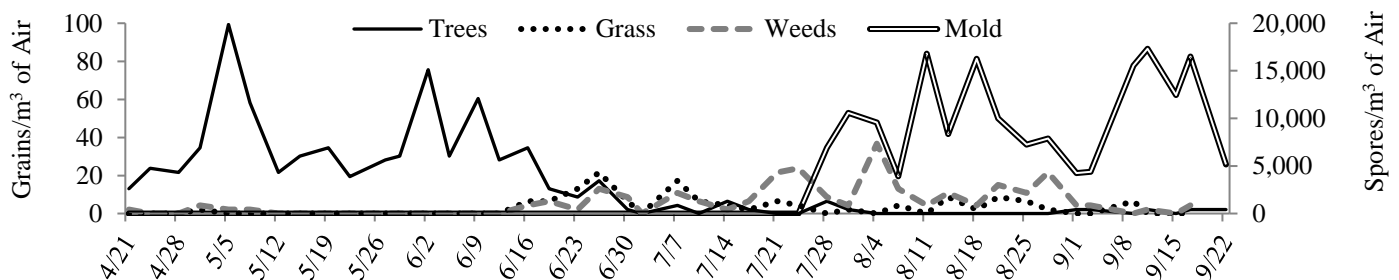
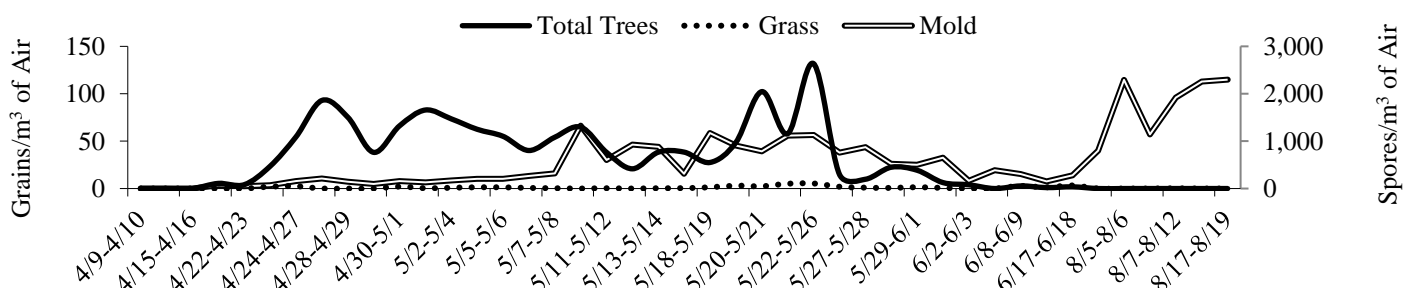


Figure 2. Pollen Grain and Mold Spore Counts — Fairbanks, April 9 through August 19, 2015



(Contributed by: Stacey Cooper, MS, Section of Epidemiology.)