

POLLUTANT LEVELS ELEVATED ON HAWAI'I ISLAND RESIDENTS ADVISED TO TAKE PRECAUTIONS

The Hawai'i State Department of Health (DOH) is urging Hawai'i County residents to take precautions to protect their health from elevated levels of sulfur dioxide (SO₂) and fine particulates 2.5 microns or smaller in size (PM_{2.5}). The 24-hour standards for these pollutants are health-based and represent a threshold below which health impacts are not expected. The 3-hour average for SO₂ is a welfare standard which is established to protect against decreased visibility and damage to property, vegetation, and animals.

Results since April 1, 2008 are as follows:

Date	Big Island Location	SO ₂ 24-hour Average (Standard = 0.14 ppm) ¹	SO ₂ 3-hour Average (Standard = 0.50 ppm)	PM _{2.5} 24-hour Average (Standard = 35 µg/m ³) ²
August 24, 2008	Pahala	0.265 ppm	0.650 ppm (3-6 a.m.) 0.854 ppm (6-9 a.m.)	
August 21, 2008	Pahala	0.190 ppm		
August 15, 2008	Pahala	0.169 ppm	0.585 ppm (6-9 a.m.)	
August 13, 2008	Pahala	0.310 ppm	0.552 ppm (12-3 a.m.) 0.898 ppm (3-6 a.m.) 0.638 ppm (6-9 a.m.)	42.8 µg/m ³
August 10, 2008	Pahala	0.142 ppm		
August 9, 2008	Pahala	0.234 ppm	0.701 ppm (6-9 a.m.)	56 µg/m ³
August 8, 2008	Pahala	0.166 ppm		
August 3, 2008	Pahala	0.141 ppm		38 µg/m ³
August 2, 2008	Pahala	0.166 ppm	0.839 ppm (6-9 a.m.)	44 µg/m ³
August 1, 2008	Pahala	0.150 ppm		
July 25, 2008	Pahala	0.183 ppm		
July 24, 2008	Pahala			37 µg/m ³
July 22, 2008	Pahala	0.218 ppm		41 µg/m ³
July 18, 2008	Kona			36 µg/m ³
	Pahala	0.232 ppm	0.616 ppm (12-3 p.m.)	42 µg/m ³
July 17, 2008	Pahala	0.154 ppm		
July 11, 2008	Pahala	0.145 ppm		39 µg/m ³
July 10, 2008	Pahala	0.160 ppm	0.583 ppm (3-6 a.m.)	58 µg/m ³
July 7, 2008	Pahala	0.218 ppm	0.689 ppm (3-6 a.m.)	
July 6, 2008	Pahala	0.208 ppm	0.758 ppm (3-6 a.m.)	
July 1, 2008	Kona			43 µg/m ³

June 28, 2008	Pahala	0.160 ppm	0.591 ppm (3-6 a.m.) 0.667 ppm (6-9 a.m.)	76 µg/m ³
June 26, 2008	Pahala	0.164 ppm		
June 12, 2008	Mtn View			39 µg/m ³
June 7, 2008	Pahala	0.311 ppm	0.549 ppm (12-3 a.m.) 1.000 ppm (3-6 a.m.) 0.639 ppm (6-9 a.m.)	72 µg/m ³
May 27, 2008	Kona			37 µg/m ³
May 1, 2008	Pahala	0.189 ppm	0.604 ppm (6-9 a.m.)	
April 30, 2008	Pahala	0.163 ppm	0.751 ppm (9 p.m. - 12 midnight)	
April 29, 2008	Pahala	0.211 ppm		37 µg/m ³
April 27, 2008	Kona			42 µg/m ³
April 26, 2008	Kona			36 µg/m ³
April 25, 2008	Mtn View	0.159 ppm	0.7 ppm	39 µg/m ³
April 24, 2008	Mtn View			40 µg/m ³
April 16, 2008	Kona			36.6 µg/m ³
April 15, 2008	Kona			36.7 µg/m ³
April 13, 2008	Pahala	0.181 ppm		
April 6, 2008	Pahala	0.147 ppm		
April 5, 2008	Pahala	0.161 ppm		
April 4, 2008	Pahala	0.249 ppm	0.586 ppm	
April 3, 2008	Pahala	0.236 ppm	0.665 ppm	
April 1, 2008	Pahala	0.154 ppm		

¹ ppm = unit of the standard is in parts per million

² µg/m³ = unit of the standard is in micrograms per cubic meter of air

Communities near the Kilauea volcano are particularly affected by increased levels of SO₂ caused by the recent volcanic activity. Communities farther away from the volcano, such as Kona, will more likely be affected by PM_{2.5}. The DOH is monitoring the SO₂ and PM_{2.5} levels in Kona, Hilo, Mountain View, and Pahala. SO₂ is also being monitored in Pahoa.

As required by rule, public notice will be issued following an exceedance of a National Ambient Air Quality Standard. To see a list of the standards, please visit this site: http://hawaii.gov/health/environmental/air/cab/cabmaps/pdf/federal_and_state_ambient_air_quality_standards.pdf

Elevated levels of pollutants such as SO₂ and PM_{2.5} can cause breathing problems in individuals especially those with pre-existing respiratory conditions, such as asthma, emphysema, and bronchitis. If you have respiratory conditions and live or work in an

area impacted by volcanic emissions, consider taking precautionary measures. The following are general recommendations from the American Lung Association:

- Stay indoors and use an air conditioner, if available.
- Do not smoke and avoid second-hand smoke.
- Limit physical exertion.
- Drink plenty of fluids to loosen mucus. Warm beverages seem to work best.
- If you take medications, make sure you have an adequate supply and keep them readily available in a convenient place.
- Contact your physician as soon as any respiratory problem develops.

While these recommendations are intended primarily for persons having respiratory or chronic lung disease, they are also useful for healthy persons during vog episodes. For additional information on respiratory health, contact your personal physician or the American Lung Association of Hawaii at (808) 537-5966.

If you have any questions, please contact the Clean Air Branch

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