

Scientific Review

Hawaii No Panacea: Air Pollution is Everywhere

“The people of Hawaii suffer from many ailments, with some of the highest rates of asthma and diabetes in the United States.”

As industry grows, the air we breathe becomes more and more polluted. People look for cleaner places to live, many turning to Hawaii as a perceived panacea for healthier living. However, the grass is not greener on the Hawaii side of the ocean.

The people of Hawaii suffer from many ailments, with some of the highest rates of asthma and diabetes in the United States. New arrivals to the islands with no previous history of pulmonary disease frequently develop asthma and other respiratory problems.

Studies on the atmospheric toxicants and bacteria contained in VOG (volcanic fog/haze) found in Hawaii show that sulfur aerosols are associated with both acute and chronic changes in human health status. VOG leads to increased hospital admissions

for asthma and chronic obstructive pulmonary disease (COPD) patients which are consistently associated with periods of VOG. State officials warn individuals to stay indoors during periods of heavy VOG.

The sulfur chemistry is changeable, predominantly composed of sulfur dioxide gas, sulfur trioxide gas, and sulfate aerosols of an acidic nature that may interact to create more toxic compounds. Other contaminants found in VOG included mercury, carbon monoxide, glass flakes/fibers, respirable dust, crystalline silica and other mineral compounds, trace metals, inorganic acids, and organic and inorganic gases, including quantifiable concentrations of hydrochloric acid (HCl) and hydrofluoric acid (HF)

There is no information on how VOG specifically relates to multiple chemical sensitivity (MCS) either as an incitant or a trigger. This is probably due to the relatively small probability of VOG exposure in the majority of Americans with MCS. The only active volcano is on the Big Island of Hawaii; however the VOG reaches all of the islands during Kona wind patterns.

Secondary damage is done on one of the few remaining areas where sugar cane fields are cleared via burning, the island of Maui. Cane burning occurs 10 months out of the year, leaving the island covered in smoke and “Maui rain” (soot and ash) from the burns. PVC piping used to water the fields is burned along with plant matter, releasing toxic vapors and gasses into the air.



Voggy Sky
Photo Credit: Lourdes Salvador

“Tests showed findings of elevated radiation from suspected depleted uranium use by the military on the Big Island of Hawaii.”

KITV 4 News Leuren Moret recently exposed other problems with air pollution in Hawaii. Tests showed findings of elevated radiation from suspected depleted uranium use by the military on the Big Island of Hawaii.

Using depleted uranium is just plain irresponsible. Rampant apathy on the islands leads to the general attitude "So? <shrug> What are you going to do?" The isolation of the islands lends itself to ongoing problems that are ineffectively regulated at a federal level.

Because the population of Hawaii is largely isolated, some activists claim that the population is intentionally used as a involuntary test group without their knowledge. Chemtrails have become more common in the skies, lending to concerns about what planes may be spraying over the islands.

Hawaii, at first glance, may seem a panacea for healthier living. On further investigation, those clear skies

may be horribly deceiving. People with MCS frequently leave and experience health improvement in other areas of the United States.

Despite the air pollution, it sure is warm, sunny, and pretty all year. However, warm, sunny, and pretty is not worth our health. If the general cost of living seems prohibitive, consider the higher cost of ongoing medical care.

Editors Note:

The KITV4 News Leuren Moret report may be viewed:

<http://www.youtube.com/watch?v=vjKlHqinuc>

References

Dunfield KE, King GM Molecular analysis of carbon monoxide-oxidizing bacteria associated with recent Hawaiian volcanic deposits.. *Appl Environ Microbiol.* 2004 Jul;70(7):4242-8.

Kullman GJ, Jones WG, Cornwell RJ, Parker JE. Characterization of air contaminants formed by the interaction of lava and sea water. *Environ Health Perspect.* 1994 May;102(5):478-82.

Michaud JP, Grove JS, Krupitsky D. Emergency department visits and "vog"-related air quality in Hilo, Hawai'i. *Environ Res.* 2004 May;95(1):11-9.

Michaud JP, Krupitsky D, Grove JS, Anderson BS. Volcano related atmospheric toxicants in Hilo and Hawaii Volcanoes National Park: implications for human health. *Neurotoxicology.* 2005 Aug;26(4):555-63.



Sugar Cane Burn in Progress
Photo Credit: Lourdes Salvador