



SMOKE, AIR QUALITY AND HEALTH

COMMUNITIES NEED TO BE BETTER INFORMED AND TAKE ACTION TO MONITOR AIR QUALITY

2019 has seen a dramatic increase in the impact and severity of wildfires worldwide. The last few months have seen wildfires sweep across many countries- causing loss of life, chaotic evacuations and massive disruption.

Huge impact on air quality

Wildfires can cause temporary large increases in outdoor airborne particles and substantial increases in gaseous air pollutants such as carbon monoxide, nitrogen dioxide, formaldehyde, and acetaldehyde.

Large wildfires can increase air pollution over thousands of square miles.

There are now various websites and apps that provide air quality monitoring. However, these all pull their information from data sets from government agencies, crowdsourced monitors and satellite imagery and do not provide a real-time and location-specific status.

“They certainly don’t provide enough data, depending on how many monitors there are locally. Wildfires, depending on the size, can cause drastically varying smoke levels in a location, depending on how close you are, wind direction and speed, and the size of the fire,” explains Tim Turney, Global Marketing Manager at Casella, a leading manufacturer of air monitoring equipment.

So while you may think that the information is reliable, the only way you can know for sure the air quality in your area is to have an air monitoring solution.

Who should take action to monitor air quality directly?

Schools, hospitals, local communities, office and industrial parks.

“Definitely locations where large numbers of people are congregated. But at an individual level, especially those who are vulnerable should take particular note of what is going on in their local area,” says Tim Turney.

“The particulate generated from wildfires is a general risk to public health, as it will drastically elevate particulate levels downwind of the fires. Just like general air pollution from sources such as traffic, elevated levels of pollution are associated with long-term health effects. In the short term, vulnerable people are particularly at risk, such as the elderly and the young, and people with existing health conditions such as asthma. Therefore, monitoring for particulate

levels and knowing when to stay indoors, by having reliable information about the levels, would be an enormous benefit. We need to keep in mind that the visible smoke may have dissipated to a level where it is not visible in the air, but particulate levels will still be high. This is where precise monitoring equipment such as the Guardian 2 is needed,” adds Tim Turney.

What air monitoring solutions do emergency services use?

Besides the general public, those fighting the fires and/or cleaning up in their aftermath have other concerns. House fires inevitably create a huge list of toxic chemicals, because of plastics found in many modern houses for instance, and firefighters and anyone in the vicinity can be exposed to toxic levels.

“We have seen a significant increase in the demand for personal air sampling pumps like the Apex 2 to monitor in these situations,” says Tim Turney.

How does it work?

Monitoring air quality is not as complex or difficult as it appears, and the equipment will monitor air pollution levels in real time and in the exact location being monitored. It requires one or several pieces of equipment such as Casella’s Guardian 2 or Apex 2, depending on the size of the area being monitored.

The Guardian 2 also monitors for wind speed and direction, which is of paramount importance in the case of a wildfire. An environmental monitor helps achieve early detection of air contaminants and that can help reduce the emission exposure to surrounding communities. The small, lightweight solution is easy to transport, install and is cost effective, and can send real-time alerts when air pollution levels become cause for concern.

To find out more about Casella’s ongoing commitment to reducing occupational and environmental health risks and the full range of dust, noise and vibration monitoring solutions, visit www.casellasolutions.com/uk/en.html



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