A Monitoring station tracks Front Range air quality in near-real time

Detlev Helmig

In response to high levels of methane in Boulder and the Front Range, University of Colorado Boulder researcher Detlev Helmig has partnered with Boulder County to create an automated monitoring system to measure potentially harmful atmospheric gases and make that data available to the public.

CUT 1 “So what we are doing here is we are monitoring a series of gasses that are related to a number of different processes and sources and these gasses drive production of ozone in the atmosphere. (:15) And that’s a concern because ozone is a harmful gas and it’s reaching levels in the front range region here that are considered unhealthy.” (:28)

Since February, researchers have been monitoring the gases at the station located near Boulder reservoir. The data gathered is analyzed in a lab on Boulder’s east campus.

CUT 2 “The critical gasses being monitored at the station right now are ozone, nitrogen oxides, methane, and volatile organic compounds. (:09) We’d like to educate the people, we’d like to inform them about the composition of the atmosphere, the behavior of the atmosphere, the influence of different sources that contribute to these gasses that we’re measuring.” (:23)

Helmig is a scientist with the Institute of Arctic and Alpine Research, or INSTAAR. He says one of the goals of the study is to find out where the gases are coming from.

CUT 3 “With those observations we are trying to better understand different contributing sources that drive the levels of these gases in the atmosphere. (:10) And of particular interest and concern here is the role of the oil and gas industries that have grown very rapidly in the region and that we found to contribute rather significantly to very important group of gases that factor into the ozone production here.” (:30)

High amounts of methane in the atmosphere can be dangerous, says Helmig. It takes a long time for methane to break down, so the more that builds up, the more dangerous it gets.

CUT 4 “And because it has such a long lifetime, it builds up - it builds up to highly elevated levels around the globe. (:07) So what we see in the atmosphere right now, it’s about two-and-a-half times that was present 200 or 300 years ago” (:13)

Helmig says the research produced here allows the public to know the air quality in real time on this [website](http://instaar.colorado.edu/arl/boulder_reservoir.html) that updates hourly.