

Is Valley importing bad air?

Monitor near coast will help UC scientists track Asian pollution.

By Mark Grossi

The Fresno Bee, Sun., June 26, 2011

Air-quality scientists have long suspected some of the San Joaquin Valley's notorious brown haze comes all the way from places like China -- taking an amazing wind-blown trip. Now it's time to find out.

Years ago, researchers confirmed plumes of east Asian forest fires, airborne dust, industrial pollution and vehicle exhaust float high in the atmosphere to California and the rest of the West.

Now, on a mountain ridge east of Big Sur, scientists will set up a monitor to capture gases, specks of soil and bits of ash that have been carried thousands of miles across the Pacific Ocean. The site is in a direct line with the heart of the Valley.

If such pollution is coming into the Valley, it might eventually ruin chances of meeting increasingly stringent federal standards, says the San Joaquin Valley Air Pollution Control District.

The Valley already is among the dirtiest air basins in the country, struggling to meet standards over the next decade.

Local officials have no control over international pollution. In the future, as local pollution is mostly controlled, such pollution might become the difference between healthy and unhealthy air, officials say.

If the pollution prevents the region from achieving air-quality standards, federal officials should consider granting the Valley clean-air status, said Seyed Sadredin, executive director of the local air district.

The U.S. Environmental Protection Agency would have to make a policy decision at that point, federal officials say.

But that issue won't be settled without years of research and discussion.

The district's governing board on June 16 decided the research would start now, approving \$130,000 for scientists from the University of California at Davis to monitor Asian pollution for 12 months.

In the next few months, scientists will set up an air-quality sampling station at an observatory owned by the Monterey Institute for Research in Astronomy, an independent, nonprofit group.

The observatory is on Chews Ridge, which is more than 5,000 feet high. Scientists have found wind-blown Asian pollution at 3,200 feet and above, so Chews Ridge should easily be high enough to get good samples, said atmospheric scientist Anthony Wexler, one of the Davis researchers involved.

Researchers say the pollution could drop to ground level in downdrafts as it moves beyond the coastal range.

The pollution might also drop lower in the atmosphere as layers of air mix together.

But those issues are not involved in the research beginning near Big Sur. Scientists simply are trying to find out whether the pollution is headed to the Valley.

Wexler, who has measured air pollution in China, said there is plenty of pollution coming from Asia. He said many governments focus more on economic development than the environment.

"The air quality in many places is incredibly bad," he said. "It's not just coal-fired plants or dust storms from the eastern deserts. The industrial and traffic emissions are huge."

Like detectives, scientists will look for fingerprints in microscopic specks of debris to figure out the source of the pollution. The chemical makeup of a particle can be linked to the location on Earth where it was formed.

Scientists can bolster their analysis by using an online tool to track the wind and the trajectory of the pollution back to its source.

Connected to the specks, scientists probably also will find ozone, which would add to the summertime ozone problems in the Valley, Wexler said.

How much would be too much pollution from Asia? Wexler said science can't answer that question yet.

He said, "The questions go like this: First, is it a problem? How often is it a problem? To what degree is it a problem? We're just starting on those questions because there is no research on this at all for the Valley."