

MIKE THOMPSON

1ST DISTRICT, CALIFORNIA

COMMITTEES:

AGRICULTURE

BUDGET

TRANSPORTATION AND
INFRASTRUCTURE



CONGRESS OF THE UNITED STATES
HOUSE OF REPRESENTATIVES
WASHINGTON, DC 20515

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Ms. Rosalind Ruth Peterson
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Dear Ms. Peterson:

You were one of several people who had contacted me regarding the number of contrails lingering in the skies over Mendocino and Lake Counties. Many of you were concerned that these phenomena may be caused by government testing of biological or chemical agents or by weather modification experiments conducted by the government.

I asked for your patience while I contacted government, academic, health care and industry experts in an effort to determine why contrails seemed to be more prevalent on the North Coast now than they were several years ago and what impact, if any, these contrails could have on our environment. I thank you for your patience and I would like to now share my findings with you.

Contrails:

Condensation trails, or contrails, are produced by aircraft engine exhaust. Contrails are mostly water, but also may contain carbon dioxide, nitrogen oxides, hydrocarbons, carbon monoxide, sulfur gases, soot and metal particles that are emitted by the aircraft.

There must be suitable weather conditions immediately behind a jet engine for a contrail to form: high humidity and cool air. The high humidity will cause water in the engine exhaust to condense on either the exhaust gases or other particles already existing in the atmosphere. If the air temperature is cold enough, these water droplets will freeze and form the ice particles that become a contrail.

If humidity is on the low side, the contrail will be short lived. If the humidity is high, the contrail will persist as the newly formed ice particles absorb water from the surrounding atmosphere. These persistent