

7July2008

S. Stanley Young, PhD

Honorable Governor Arnold Schwarzenegger  
State Capitol Building  
Sacramento, CA 95814

Dear Governor Schwarzenegger:

I am a statistician and I specialize in the analysis of complex data sets. A draft report from the Air Resources Board, Mary D. Nicols, Chairman, "Methodology for Estimating Premature Deaths Associated with Long-term Exposures to Fine Airborne Particulate Matter in California," has come to my attention. I note that none of the authors are professional statisticians. Some are trained in epidemiology. It is useful to know that the track record of epidemiologists in the use of statistics to make claims that are reproducible is very poor. Their claims fail to replicate 80-90% of the time, Ioannidis, JAMA, 2005. Their recommendations, most likely wrong, are projected to be very costly.

I suggest that you consider having the report vetted by professional statisticians for data quality, completeness of cited literature, and appropriate use of statistical methods. California is blessed with outstanding statisticians. One to consider is Professor David Freedman, UC Berkeley. He co-wrote a report on the use of statistics as evidence for the US Justice Department.

The analysis of observational environmental data is very complex. Given the importance of the recommendations, it would seem essential that skilled, professional statisticians using the best methods be employed for the analysis and interpretation of this body of data.

Sincerely,

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Fellow, American Statistical Association