This document reviews various sources of evidence in an effort to evaluate the safety potential of current and improved front fog lamps. Crash data are reviewed to identify the specific safety consequences of fog, and studies of the visual effects of front fog lamps are reviewed. Finally, there is a discussion of the likely effects of current and improved front fog lamps on driver behavior and on overall safety. The conclusions are that there is very little evidence for a safety benefit from current front fog lamps relative to low beams, that there is little reason to expect that there would be a safety benefit even from improved lamps, and that, in terms of vehicle lighting, the most promising approach to improving safety in fog would be the use of rear fog lamps. In spite of a lack of evidence for safety benefits in fog, fog lamps are a popular optional form of forward lighting for all conditions, rather than specifically in fog.

Given the uncertainties in our present knowledge about how current fog lamps, and potential new fog lamps, affect vision and safety, it would be beneficial to learn more about those issues before adopting new standards for fog lamps, or retiring the current standards. One approach that seems particularly important would be studies that examine the possibly complex reactions of drivers to fog and fog lamps in terms of steering behavior, speed control, and decisions about where and when to risk driving in fog. A second area would be to do a more complete analysis than has yet been done of the crash data concerning fog, perhaps focusing specifically on the issue of how fog affects road-departure crashes.