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re is no national agreement among ucators and experts as to specific steps to be taken when drivers enter and operate in a dense fog zone. A need exists to resolve the present controversy over the conflicting advice currently being disseminated concerning driving procedures in fog.

7. At present, there are no criteria in driver education or research literature that will aid drivers in determining safe driving speeds under various conditions of fog.

- 8. Some progress has been made in the design and manufacture of equipment for fog detection, for measuring the density of fog, and for operational guidance systems, but most of these facilities and programs are still in the experimental stage, and therefore, cost-effectiveness determinations cannot be made. Fog abatement techniques such as hygroscopic seeding from the air have not proved to be economically feasible for wide application to clearing of highways. However, it appears that the incept would be useful on a limited basis high-risk locations such as intersections.
- 9. With a few exceptions, there are no standard emergency operational procedures employed by State highway departments and police agencies for dealing with the problems related to driving on Interstate highways and freeway systems under heavy fog. However, one procedure in limited operation concerns the escort system as exemplified in "Operation Fogbound" by the California Highway Patrol, a program which has proved to be an effective method to reduce the frequency of highway fog accidents.
- 10. A need exists for areawide organizational control and training relating to the specific problems of preventing and controlling large-scale fog-related accidents in those areas susceptible to highway fog which may cover several jurisdictions.

## IX. RECOMMENDATIONS

The National Transportation Safety Board recommends that:

- 1. The Federal Highway Administration and the American Association of State Highway Officials, in cooperation with highway departments. various State particularly in those States subject to fog, develop standards and procedures for controlling highway traffic on the interstate and high-speed highways during heavy fog or other visibility-limiting conditions, which would: (a) close down temporarily to all vehicular traffic that segment of the highway experiencing heavy fog; or (b) to close down temporarily to all heavy-duty trucks access to those segments of the highway under conditions. visibility adverse (Recommendation H-72-49)
- 2. The Federal Highway Administration expedite its short- and long-range program to develop highway guidance systems that provide drivers with information about the status (i.e., speed) of vehicle operation ahead. (Recommendation No. H-72-50)
- 3. The National Highway Traffic Safety Administration assume a leadership role with driver educators to resolve the conflicting information which is being taught relative to driving tactics in fog. (Recommendation No. H-72-51)
- 4. The National Highway Traffic Safety Administration modify the Driver Education Standard (Standard No. 4) to include more definitive information relative to reduced-visibility driving. (Recommendation No. H-72-52)
- 5. The National Highway Traffic Safety Administration recommend to driver education instructors the need to stress in the teaching of drivers that there is no

- single solution to the highway fog problem, and point out the need to avoid or discontinue highway use until conditions warrant safe travel. (Recommendation No. H-72-53)
- 6. The National Highway Traffic Safety Administration reemphasize the necessity for the States to fully implement Highway Safety Program Standards: Emergency Medical Services (Standard No. 11), Police Traffic Services (Standard No. 15), and Debris Hazard Control and Cleanup (Standard No. 16). (Recommendation No. H-72-54)
- 7. The Federal Highway Administration, the American Association of State Highway Officials, and the International Association of Chiefs of Police urge the State Highway Departments and State Law Enforcement Agencies to cooperate in the development of written guidelines and procedures that provide for mutual assistance when limited visibility or any natural disaster warrants highway closings. (Recommendation No. H-72-55)
- 8. The National Highway Traffic Safety Administration urge that in the implementation of Highway Safety Program Standard No. 15 (Police Traffic Services) the States develop and put into practice the escort service as exemplified by "operation Fogbound" utilized by the California Highway Patrol, where highway fog or other limited visibility conditions warrant its use. (Recommendation No. H-72-56)
- 9. The International Association of Chiefs of

- Police recommend to its members that the escort service as exemplified by "Operation Fogbound" utilized by the California Highway Patrol be instituted where highway fog conditions warrant its use. (Recommendation No. H-72-57)
- 10. The States encourage their political subdivisions to develop and implement programs that provide for area wide organization, planning, training, and operational control, in the event of all types of accidents that involve the emergency rescue services of several jurisdictions. Such programs provide for overall control and coordination of an accident situation by one authority. (Recommendation No. H-72-58)
- 11. The American Bar Association, the International Association of Chiefs of Police, and the National Committee on Uniform Traffic Laws and Ordinances review the existing basic speed rule as it applies to the operation of vehicles under fog conditions and existing practices relating to the enforcement of the rule under these conditions. There is presently an absence of criteria that can be used by drivers in determining a common and appropriate speed for a given condition. Likewise, there is an absence of enforcement except when accidents occur. This situation suggests a need for uniform and more definitive criteria under fog conditions which will be both a guide to drivers and a basis for effective enforcement action. (Recommendation No. H-72-59)