

## HR-210, Effect of Wildlife Highway Warning Reflectors on Deer-Vehicle Accidents

### Abstract

The number of deer-vehicle accidents in Iowa and around the country has steadily increased during the past 30 years. This is basically due to: (1) Increased volume of traffic; (2) an expanding network of roads; and (3) a general increase in deer populations.

Various methods of reducing these accidents have been attempted with varying degrees of success. This project was designed to evaluate a new method of reducing deer-vehicle accidents. In 1979, a cooperative research project on a new deer reflector system developed in Europe was initiated by the Iowa Conservation Commission and the Iowa Department of Transportation. The main objective of this project was to evaluate the Swareflex and Bosch reflector systems in reducing deer-vehicle accidents.

Reflectors were installed at five deer crossing sites distributed around the state of Iowa. They were left in place from 1979 through 1983. Conservation officers in charge of each site were asked to record information on the date and time of each accident, and the sex and age of each deer killed.

Results were inconclusive – one of the sites showed a significant drop in deer kills after installation while the others did not. Also the number of kills did not generally increase after reflectors were removed at the end of the test phase.

There were problems with the design of the reflectors. The Swareflex reflectors had a tendency to break off of the delineator post after several months of use. This was corrected by the manufacturer adding more support to the mounting bracket. Also, both brands of reflectors exhibited significant decreases in reflectivity over time, probably due to corrosion from moisture. Finally, 10 to 20 percent of the Swareflex reflectors exhibited stress fractures in the plastic reflective lens during the test period.

### Conclusion

The reflectors appeared effective in some areas and not in others. It was apparent that deer avoided reflectorized segments of the highway by traveling around them and entering other areas where they were susceptible to traffic accidents. Traffic volume was measured and did not show a significant correlation to deer-kill type accidents. Other factors which may have had an impact on the accident statistics were the small sample size, changes in deer density, weather, crop harvest, etc.