**Rural Road Safety & Toward Zero Deaths**

**Methodology and References**

2007 - 2009 Average Annual Rural Road Fatalities

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**Fatality Rates**

Fatality data is drawn from the Fatality Analysis Reporting System (FARS). The Urban Area data set from the U.S. National Atlas (nation-alatlas.gov/mld/urbanap.html) was used to determine which events were rural or urban. Often, buffers of varying size are created around the designated urban areas to capture fatalities occurring in rural areas in close proximity to urban areas. For the purposes of this study, no buffers were used in order to more fully illustrate the severity of the rural highway safety problem. Using this method, approximately 79% of road fatalities occur in rural areas. More commonly cited numbers come from the National Highway Traffic Safety Administration, which reported in 2008 that 56% of all traffic fatalities occurred in rural areas (www-nrd.nhtsa.dot.gov/Pubs/811164.pdf). According to the U.S. Census Bureau, only 23% of the population lived in rural areas that year. More information on rural fatalities by state can be found at safety.fhwa.dot.gov/local_rural/rural_fatal.cfm.

**TZD States**

At this time a single, national, comprehensive list of TZD states does not exist. The states included by CERS were identified by examining the Strategic Highway Safety Plan (SHSP) of each state for an explicit mission, vision, or goal of zero fatalities. A small number of states made no mention of a zero fatality goal in their SHSP but do have other, official state-sponsored zero death objectives in other highway documents or statewide safety programs. These states have also been included.

Other agencies and organizations have internal, unofficial lists of TZD states, but none is considered authoritative. Disagreement arises over the degree of commitment to the zero death goal: some states only have a goal or vision for TZD, while others have formal agencies, partnerships, and educational campaigns. Some states use the zero fatality goal as the backbone of their SHSP, but not beyond. More commonly, states acknowledge a long-term zero death goal but do not necessarily have aggressive interim goals to achieve zero deaths by a target year. CERS and many organizations look forward to the forthcoming National Cooperative Highway Research Program (NCHRP) Project 17-51 to further define the zero fatality approach as a basis for determining which states should be considered TZD states. More on the NCHRP project is available at www.strategicsafetyplan.com/index.html. This map is current as of March 6, 2012.
**Policy Countermeasure References**

**Seat Belt Enforcement**
**Effectiveness:** Transportation Research Record: Journal of the Transportation Research Board, No. 2213, Transportation Research Board of the National Academies, Washington, D.C., 2011, pp. 29-36. DOI: 10.3141/2213-05. **Public Support:** Transportation Research Record: Journal of the Transportation Research Board, No. 2213, Transportation Research Board of the National Academies, Washington, D.C., 2011, pp. 29-36. DOI: 10.3141/2213-02.

**Graduated Driver Licensing (GDL) Programs**
**Effectiveness:** Transportation Research Record: Journal of the Transportation Research Board, No. 2213, Transportation Research Board of the National Academies, Washington, D.C., 2011, pp. 29-36. DOI: 10.3141/2213-05. **Public Support:** Transportation Research Record: Journal of the Transportation Research Board, No. 2213, Transportation Research Board of the National Academies, Washington, D.C., 2011, pp. 9-12. DOI: 10.3141/2213-02.

**Sobriety Checkpoints**
**Effectiveness:** Transportation Research Record: Journal of the Transportation Research Board, No. 2213, Transportation Research Board of the National Academies, Washington, D.C., 2011, pp. 29-36. DOI: 10.3141/2213-05. **Public Support:** Transportation Research Record: Journal of the Transportation Research Board, No. 2213, Transportation Research Board of the National Academies, Washington, D.C., 2011, pp. 9-12. DOI: 10.3141/2213-02.

**Ignition Interlocks**
**Effectiveness:** Transportation Research Record: Journal of the Transportation Research Board, No. 2213, Transportation Research Board of the National Academies, Washington, D.C., 2011, pp. 29-36. DOI: 10.3141/2213-05. **Public Support:** Transportation Research Record: Journal of the Transportation Research Board, No. 2213, Transportation Research Board of the National Academies, Washington, D.C., 2011, pp. 9-12. DOI: 10.3141/2213-02.

**Staggered Sentencing for DWI Offenders**

**Universal Motorcycle Helmet Laws**
**Effectiveness:** Transportation Research Record: Journal of the Transportation Research Board, No. 2213, Transportation Research Board of the National Academies, Washington, D.C., 2011, pp. 29-36. DOI: 10.3141/2213-05. **Public Support:** Transportation Research Record: Journal of the Transportation Research Board, No. 2213, Transportation Research Board of the National Academies, Washington, D.C., 2011, pp. 9-12. DOI: 10.3141/2213-02.

**Automatic Speed Enforcement (ASE)**
**Effectiveness:** Transportation Research Record: Journal of the Transportation Research Board, No. 2213, Transportation Research Board of the National Academies, Washington, D.C., 2011, pp. 29-36. DOI: 10.3141/2213-05. **Public Support:** Transportation Research Record: Journal of the Transportation Research Board, No. 2213, Transportation Research Board of the National Academies, Washington, D.C., 2011, pp. 9-12. DOI: 10.3141/2213-02.

**Roundabouts**

**Engineering Countermeasure References**

**The Safety Edge**
For more information on the Safety Edge and other proven safety countermeasures, please visit http://safety.fhwa.dot.gov/provencountermeasures/ or http://www.fhwa.dot.gov/everydaycounts/technology/safetyedge/intro.cfm.

**Cable Median Barriers**

**Rumble Strips and Retroreflective Signs**

**Dynamic Warning Systems**

**Roundabouts**

**Technology**
For more information on CrashHelp and other innovations developed by CERS, please visit www.ruralsafty.umn.edu.

**TZD at Work References**
Please visit www.targetzero.com for more information on Target Zero. The Washington Traffic Safety Commission can be found at www.wtsc.wa.gov. For Minnesota, Toward Zero Deaths can be found online at www.minnesota.tzd.org. The national portal for Zero Fatalities is www.zerofatalities.com. More information on the national TZD strategy can be found through the Federal Highway Administration at safety.fhwa.dot.gov/tzd/. The full national framework is under development and will be released as a part of the forthcoming National Cooperative Highway Research Program Project 17-51 (www.strategiesafetyplan.com/index.html).

For more information on this and other CERS projects, please contact CERS at cts@umn.edu

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