

High Risk Rural Roads (HRRR) Program Best Practices

2nd Vision Safe Drive

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Rapid City, SD

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FHWA – Office of Safety



U.S. Department of Transportation
Federal Highway Administration



Safe Roads for a Safer Future
Investment in roadway safety saves lives

Local, Rural, RSA, SRTS Team

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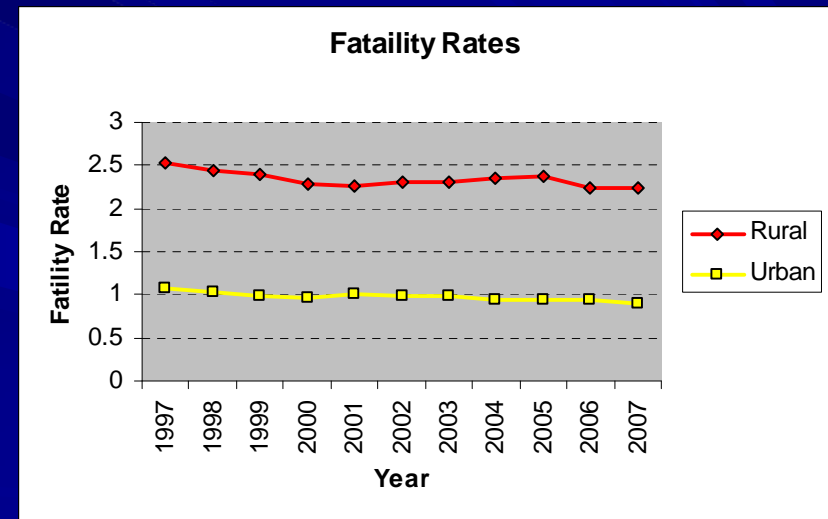
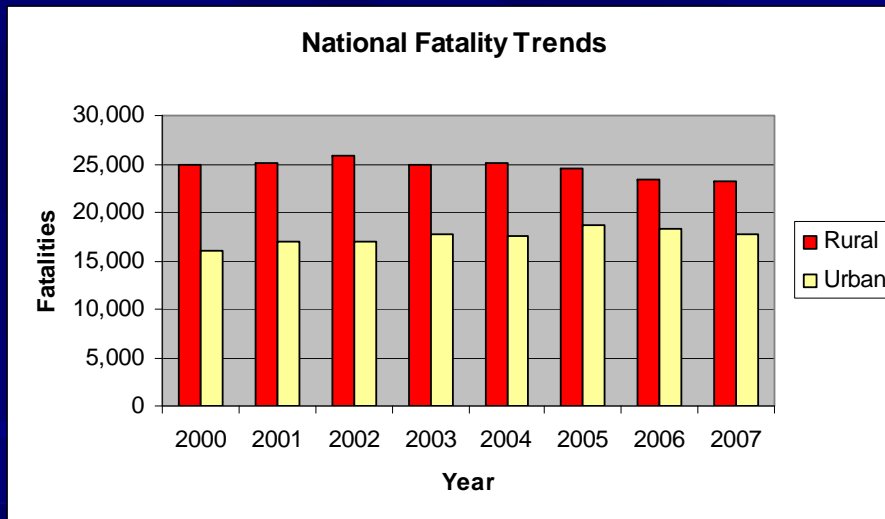
Highway Safety

- Approximately 8.4 million lane miles
- Rural Roads account for over 6 million



Highway Safety

■ National Fatality Trends





To Save Lives, We Must Partner

- We will all benefit from reducing the highway death toll.
- No single organization or agency can reduce roadway fatalities alone.
- Together, we can develop solutions.
- Comprehensive highway safety programs include the 4 “E’s”—**Engineering, Education, Enforcement, and Emergency Medical Services (EMS).**

High Risk Rural Road (HRRR) Definition

- **23 U.S.C. §148(a)(1) defines a High Risk Rural Road (HRRR). States are required to identify these roadways (and expend the HRRR funds) according to the following definition:**
- **"...any roadway functionally classified as a rural major or minor collector or a rural local road --**

HRRR Definition (Cont.)

- A.

on which the accident rate for fatalities and incapacitating injuries exceeds the statewide average for those functional classes of roadway; or

HRRR Definition (Cont.)

- B.

that will likely have increases in traffic volume that are likely to create an accident rate for fatalities and incapacitating injuries that exceeds the statewide average for those functional classes of roadway."

High Risk Rural Road (HRRR) Funds

- \$90 million annual set aside from HSIP
 - \$359 million FY 06, 07, 08, 09 = Total
 - \$88.8 million (25%) obligated, 3/31/09
-
- \$2,482 million (53%) HSIP obligated
 - \$4,721 million HSIP Total

HRRR State Obligations

- 37 States obligated some
- 13 States obligated Zero
- 11 States obligated $> 50\%$ of their funds
- 10 states obligated $> \$4$ million each

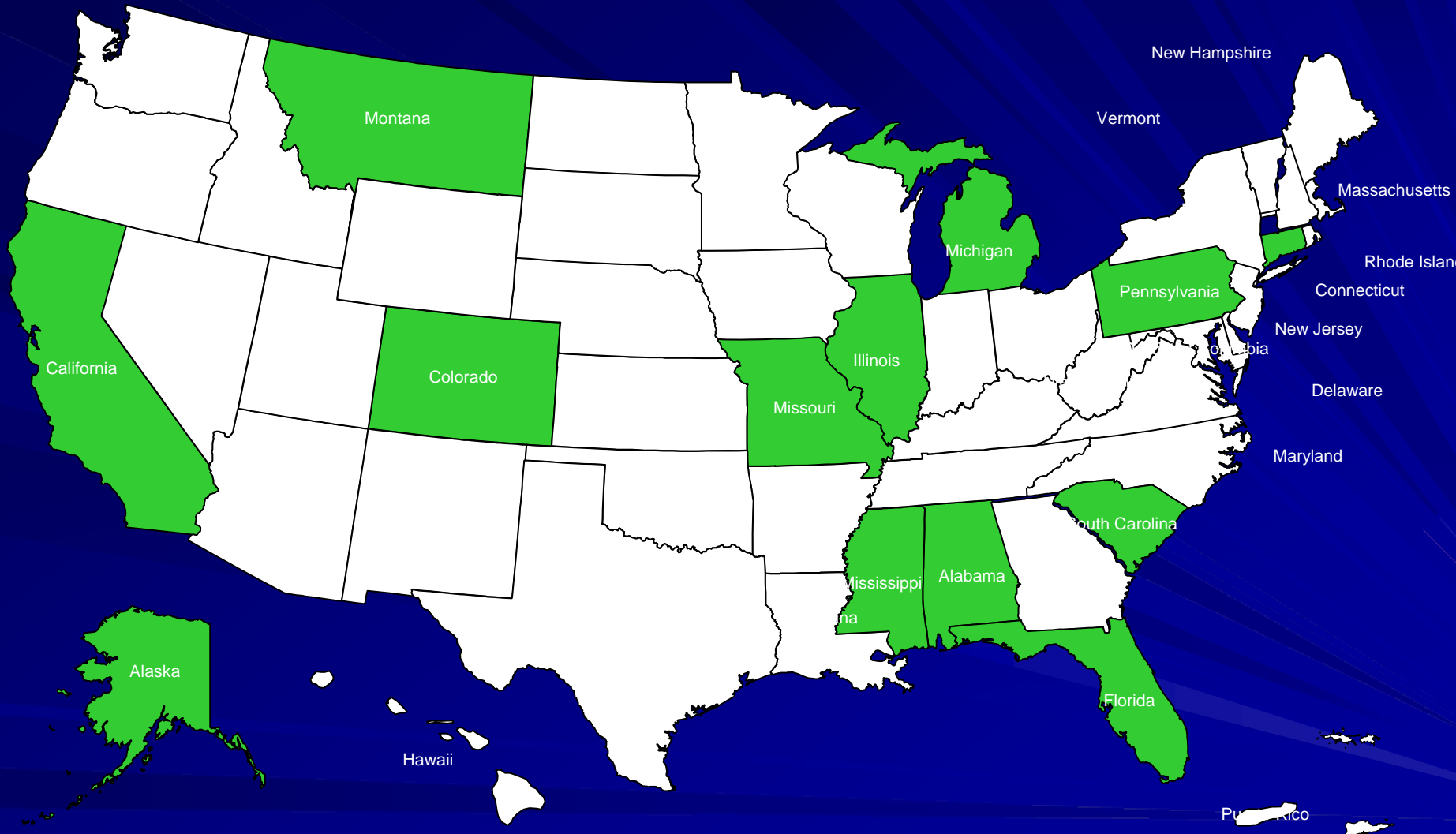
Top State Obligations

- \$9.8 million - Florida
- \$7.6 million – Illinois
- \$7.3 million - Alabama
- \$7.2 million – Michigan
- \$7.1 million – Missouri
- \$5.9 million – California
- \$5.1 million – Colorado

Top State Obligations – Cont.

- \$5.0 million – Pennsylvania
- \$4.6 million – Mississippi
- \$4.4 million - South Carolina
- \$3.3 million – Indiana
- \$2.3 million – Iowa
- \$2.3 million – Montana
- \$2.2 million - Connecticut

States which obligated 50% or \$4 Million of their HRRR funding



West Virginia

- HRRR Funds designated for County Routes in the transparency report (5%)
- Fatal, type A injury crashes or Lane Departure crashes
- District Engineers are evaluating projects on 19 County Routes
- No funds obligated yet

Missouri

- Frequency of severe crashes – use Equivalent Property Damage value, Fatal 6, Disabling injury 9
- Severity Number per mile used for local roads where there is no volume data
- Total crashes per mile also considered because there may be potential for severe crashes
- Local roads did not rise up in the process
- \$3.7 million obligated

Michigan

- All projects are on local roads
- MDOT directs local agencies to website with maps of all Fatal and Disabling Injury local system crashes on qualifying roads (crash rate per mile)
- Local agencies define segments which can be up to 8 miles long based on a single crash
- MDOT staff scores projects based on cost effectiveness, crash history, variety of factors.
- Force account can be used up \$100 K if 6% less than contract estimate.

Michigan (Cont.)

- Project types: rumble strips, flattening curves, signing, pavement marking, turn lanes, clear zone improvements, guardrail, slope flattening, sight distance clearing
- Limited to \$400 K federal per project
- \$7.2 million obligated

Nebraska

- Monthly meetings of HRRRP Team of Neb. Dept. Of Roads, safety section, LPA traffic engineer, LTAP, and Assoc. of Highway Superintendents rep and FHWA.
- Traffic data limited on County roads. Evaluate different crash factors such as horizontal curves, intersections, bridges, for statewide consideration.
- Horizontal curve signing project was very popular with 71 of 93 counties participating.

Nebraska (Cont.)

- Other projects are 4 way intersection signing, pavement marking, guardrail/bridge rail, lighting and curve flattening.
- \$1.1 million obligated

Nevada

- Using HRRR funds to install centerline rumble strips system wide on qualifying roadways
- Used weighted crash count/length of route (miles) for fatal and injury crashes
- Established statewide average crash rate by dividing total weighted crash count by total length

Nevada (Cont.)

- Critical rate calculated was 0.399 weighted crashes per mile and routes above this are eligible for HRRR funding
- \$1 million obligated

Montana

- Developed approach for county roads (55,000 miles) based on crashes per mile to identify sites of interest within each township and range with 15 crashes or more (low population areas) and 20 crashes or more (in 3 counties with MPOs)
- MDT conducts field reviews to determine potential countermeasures, and sites with highest B/C ratio are sent to Transportation Commission for action
- \$2.3 million obligated

Wyoming

- The LTAP Center at the University of Wyoming is working with the 23 counties and the State to identify eligible HRRR locations and projects.
- Volume data is very limited on these roads.
- No funds obligated yet

Best Practices Guide for High Risk Rural Roads (in development)

- Information on states that have been successful implementing the HRRR program and how they have done it

Road Safety Audit (RSA)

- Peer-to-Peer Program, Training
 - Quarterly Newsletter
- <http://safety.fhwa.dot.gov/rsa>



Crash Reduction Factors

- Example: installation of centerline rumble strips on a two-way roadway can expect a 14% reduction in all crashes and a 55% reduction in head-on crashes.

<http://safety.fhwa.dot.gov/tools>

- New - NHI web based training is also available

Nine Proven Safety Countermeasures

(July 10, 2008 Safety Memo)

- Road Safety Audits
- Rumble Strips and Rumble Stripes
- Median Barriers
- Safety Edge
- Roundabouts

Countermeasures - cont.

- Left and Right Turn Lanes at Stop Controlled Intersections
- Yellow Change Intervals
- Medians and Pedestrian Refuge Areas in Urban and Suburban Areas
- Walkways

Conclusion

- Challenges exist in some states and localities such as limited crash data, traffic data and staffing and other resources.
- Some states have found a variety of ways to meet these challenges
- States partnering with LTAPs, local governments and their associations can be valuable
- Exchanging information and practices among peers can lead to solutions

<http://safety.fhwa.dot.gov>

