

Intersection Collision Avoidance Work



Toward Zero Deaths
October 8, 2008

Overview

- The Problem
- The Goal
- The Projects
- The Challenge
- Questions

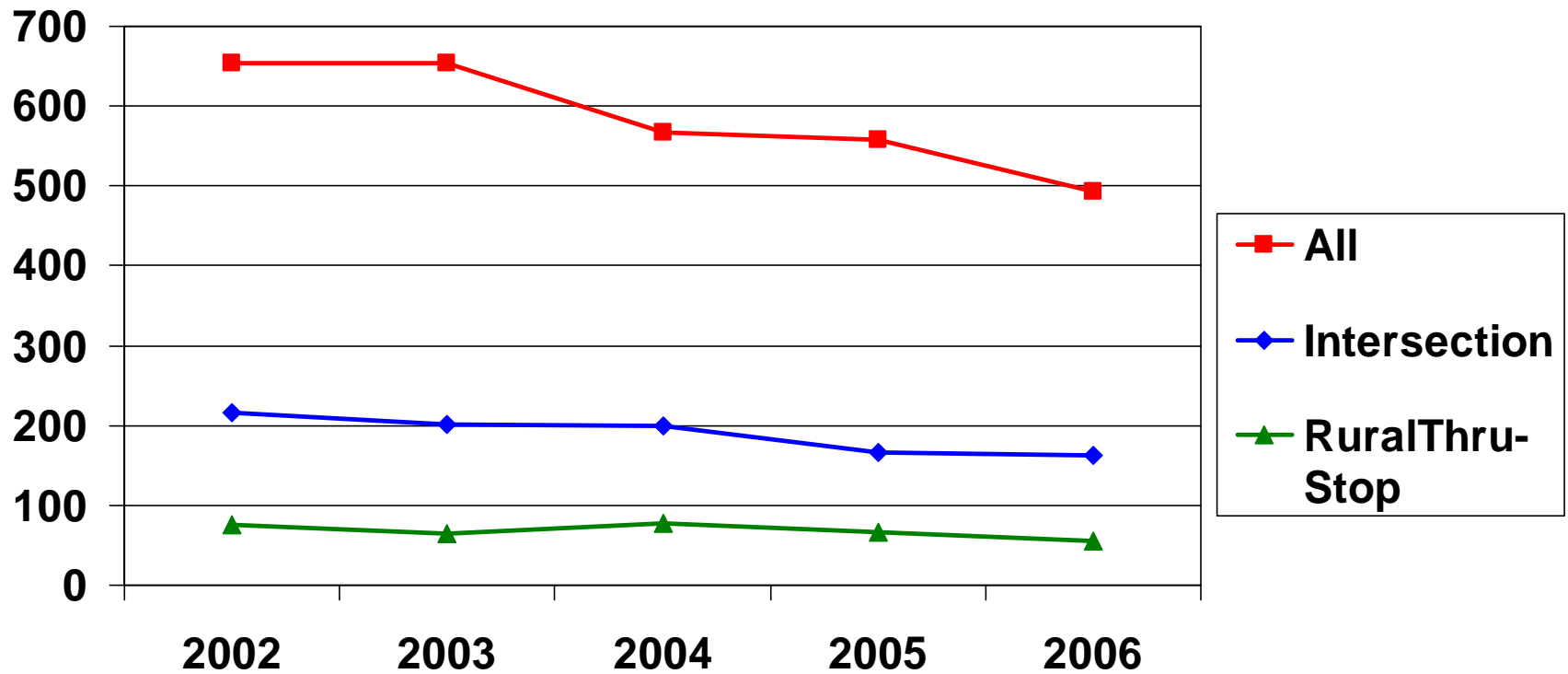
The Problem

- ❑ 500-600 people die on Minnesota roads each year
- ❑ 163 out of 494 fatalities were intersection related in 2006
 - 56 occurred at rural thru-stops¹
- ❑ 340 fatalities occurred at rural thru-stop intersections from 2002-2006
 - 36% of all intersection related fatalities (948)
 - 12% of all fatalities (2,926)

¹ Rural thru-stops were identified from crash reports coded as “Stop Sign-Other” under Traffic Control Device

The Problem

Fatalities on Minnesota Roads



The Goal

- Minnesota is driving Toward Zero Deaths
 - Fewer than 500 deaths by 2008 was reached in 2006
 - Fewer than 400 deaths by 2010 – new goal
- Decrease fatalities at rural thru-stop intersections
 - 68 fatalities on average from 2002-2006
 - *Proposed target: Fewer than 54 deaths at rural thru-stop intersections by 2010*

The Projects

- Intersection Decision Support (IDS)
 - 2002-2006
 - USDOT, University of Minnesota, California, Virginia
 - Identified the nature of rural intersection crashes – poor gap selection
 - Reports available online²

² <http://www.its.umn.edu/Publications/ResearchReports/>

The Projects

- Toward a Multi-State Consensus on Rural IDS (pooled fund)
 - 2004-2008
 - USDOT, University of Minnesota, CA, GA, IA, MI, NC, NH, NV, WI
 - Gather and analyze data from intersections in each state to understand regional differences in crash causes at rural thru-stop intersections
 - Poor gap selection still underlying cause
 - Reports available online³

³ <http://www.its.umn.edu/Publications/ResearchReports/>

The Projects

- Intersection Warning System
 - 2007-2009
 - Hennepin County, SEH, NTT, SRF (evaluation)
 - Develop and test low-cost warning system
- Cooperative Intersection Collision Avoidance Systems – Stop Sign Assist (CICAS-SSA)
 - 2006-2009 (R&D), 2010-2011 (op test)
 - USDOT, University of Minnesota
 - Strong emphasis on intersection-vehicle cooperation

The Projects

- District 3 Advance Warning for Mainline
 - Activated September 24, 2008
 - US169 and CR11 in Mille Lacs County
 - Cost was approximately \$25,000
 - Warning sign “CAUTION CROSSING TRAFFIC WHEN FLASHING”
 - Yellow beacon flashes when CR11 traffic is approaching or in crossover median

The Projects

- Intersection Crash Analysis
 - To be complete April 2009
 - Reviewing intersection crashes on state and county roads
 - Identify candidate intersections for enhancements
- Safe Intersections
 - *Proposed for 2009*
 - Evaluate warning system effectiveness through larger scale operational field test

The Projects

▣ Projects in other states



■ Pennsylvania (2001)



■ Virginia (2007)

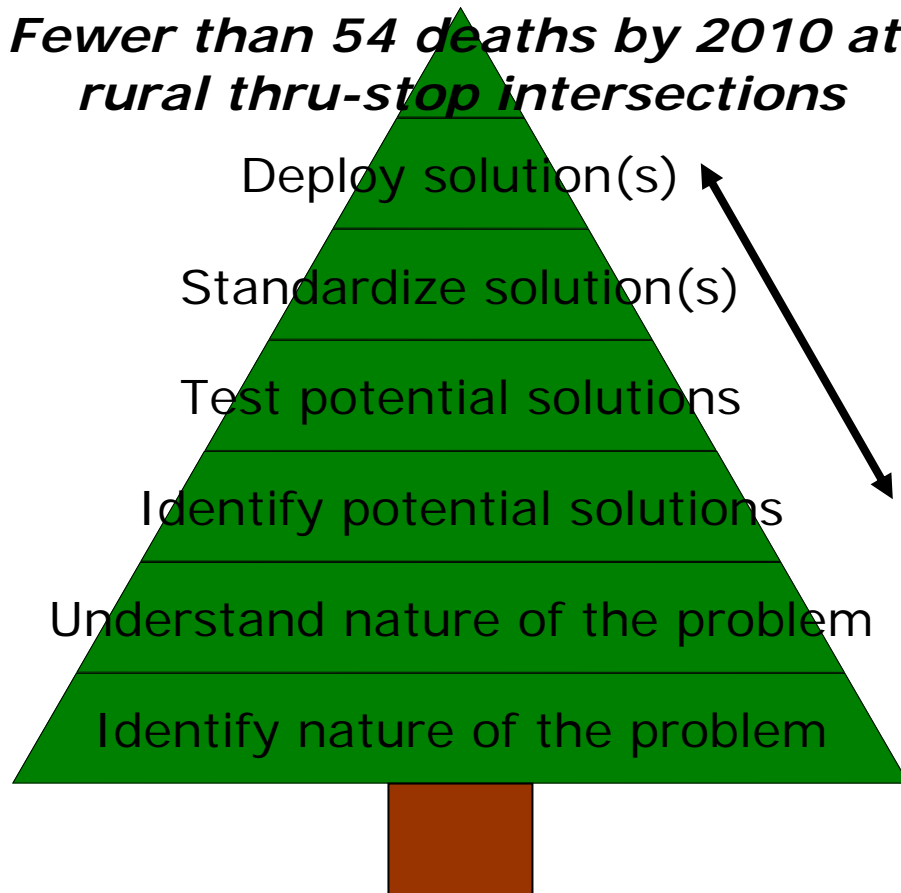


■ Maine (2001)

The Challenge



Fewer than 54 deaths by 2010 at rural thru-stop intersections



- What should be researched and tested?
- How should research and testing be coordinated?
- How much is enough?
- How long should it take?

Questions?



Ray Starr, Mn/DOT

651.234.7050

ray.starr@dot.state.mn.us