

---

2012 TZD Regions Evaluation

# MINNESOTA TOWARD ZERO DEATHS

Katie Fleming, M.A.

Eric DeVoe

Minnesota Department of Transportation

Office of Traffic, Safety, and Technology

---



# TABLE OF CONTENTS

---

|  |           |
|--|-----------|
| MINNESOTA TOWARD ZERO DEATHS.....                              |           |
| LIST OF FIGURES.....   | III       |
| EXECUTIVE SUMMARY .....  | VI        |
| Regional Partners .....  | vii       |
| A Network of Traffic Safety Advocates.....                     | vii       |
| The Cumulative Impact of Regional Growth and Maturity.....     | viii      |
| Future Evaluations.....  | viii      |
| <b>HOW TO READ THIS REPORT .....</b>                           | <b>1</b>  |
| Introduction.....  | 1         |
| The Evaluation Grid .....                                      | 1         |
| The Measure of Success .....                                   | 1         |
| Statistical Comparisons.....                                   | 2         |
| Methods .....  | 2         |
| <b>SOUTHEASTERN MINNESOTA TZD REGION .....</b>                 | <b>3</b>  |
| Introduction.....  | 3         |
| Southeastern Minnesota TZD Regional Evaluation Grid.....       | 4         |
| Southeastern Minnesota TZD Region Partnership Activities.....  | 6         |
| Southeastern Minnesota TZD Region Statistical Comparisons..... | 9         |
| Benefits and Persistent Challenges .....                       | 10        |
| <b>SOUTHWESTERN MINNESOTA TZD REGION.....</b>                  | <b>11</b> |
| Introduction.....  | 11        |
| Southwestern Minnesota TZD Regional Evaluation Grid.....       | 13        |
| Southwestern Minnesota TZD Region Partnership Activities.....  | 15        |
| Southwestern Minnesota TZD Region Statistical Comparisons..... | 18        |
| Benefits and Persistent Challenges .....                       | 19        |
| <b>SOUTH CENTRAL TZD REGION .....</b>                          | <b>20</b> |
| Introduction.....  | 20        |
| South Central Minnesota TZD Regional Evaluation Grid .....     | 21        |

|   |           |
|---|-----------|
| South Central Minnesota TZD Region Partnership Activities .....                           | 23        |
| South Central TZD Region Statistical Comparisons.....                                     | 26        |
| Benefits and Persistent Challenges .....  | 27        |
| <br>  |           |
| <b>NORTHWESTERN MINNESOTA TZD REGION .....</b>  | <b>29</b> |
| Introduction.....   | 29        |
| Northwestern Minnesota TZD Regional Evaluation Grid.....                                  | 30        |
| Northwestern Minnesota TZD Region Partnership Activities.....                             | 32        |
| Northwestern Minnesota TZD Region Statistical Comparisons.....                            | 35        |
| Benefits and Persistent Challenges .....  | 36        |
| <br>  |           |
| <b>NORTHEASTERN MINNESOTA TZD REGION.....</b>   | <b>38</b> |
| Introduction.....   | 38        |
| Northeastern Minnesota TZD Regional Evaluation Grid.....                                  | 39        |
| Northeastern Minnesota TZD Region Partnership Activities.....                             | 41        |
| Northeastern Minnesota TZD Region Statistical Comparisons.....                            | 44        |
| Benefits and Persistent Challenges .....  | 46        |
| <br>  |           |
| <b>SUMMARY.....</b>   | <b>47</b> |
| <br>  |           |
| <b>CONCLUSION AND RECOMMENDATION .....</b>  | <b>49</b> |
| <br>  |           |
| <b>APPENDICES .....</b>   | <b>51</b> |
| Appendix A: Abbreviations and Acronyms .....  | 51        |
| Appendix B: Map of Minnesota TZD Regions and Local Minnesota Traffic Safety Programs..... | 52        |
| Appendix C: Minnesota TZD Roadmap of Partners .....                                       | 53        |
| Appendix D: 2011 and 2012 Safe and Sober Calendar .....                                   | 54        |
| Appendix E: Minnesota Law Enforcement Liaisons.....                                       | 56        |
| Appendix F: Designated Trauma Hospitals.....  | 57        |
| Appendix G: Completed County Road Safety Plans.....                                       | 58        |
| <br>  |           |
| <b>REFERENCES.....</b>  | <b>59</b> |

# LIST OF FIGURES

---

|   |      |
|---|------|
| MINNESOTA TOWARD ZERO DEATHS.....   |      |
| LIST OF FIGURES.....  | III  |
| EXECUTIVE SUMMARY .....   | VI   |
| Graph 1: Minnesota Roadway Fatalities and Toward Zero Deaths Goals.....                                       | vi   |
| Regional Partners .....   | vii  |
| A Network of Traffic Safety Advocates.....  | vii  |
| Graph 2: An Ideal Network of Traffic Safety Advocates and Stakeholders.....                                   | vii  |
| The Cumulative Impact of Regional Growth and Maturity.....  | viii |
| Graph 3: Minnesota TZD Regions by Year Established .....  | viii |
| Future Evaluations.....   | viii |
| HOW TO READ THIS REPORT .....   | 1    |
| Introduction.....   | 1    |
| The Evaluation Grid .....   | 1    |
| The Measure of Success .....  | 1    |
| Statistical Comparisons.....  | 2    |
| Methods .....   | 2    |
| SOUTHEASTERN MINNESOTA TZD REGION .....   | 3    |
| Introduction.....   | 3    |
| Southeastern Minnesota TZD Regional Evaluation Grid.....  | 4    |
| Southeastern Minnesota TZD Region Partnership Activities.....   | 6    |
| Southeastern Minnesota TZD Region Statistical Comparisons.....  | 9    |
| Graph 4: Southeastern Minnesota Region Fatal and Serious Injury Crashes/Fatalities and Serious Injuries ..... | 9    |
| Table 1: Southeastern Minnesota Region Comparison of Baseline to 2011.....                                    | 10   |
| Benefits and Persistent Challenges .....  | 10   |
| SOUTHWESTERN MINNESOTA TZD REGION.....  | 11   |
| Introduction.....   | 11   |
| Southwestern Minnesota TZD Regional Evaluation Grid.....  | 13   |
| Southwestern Minnesota TZD Region Partnership Activities.....   | 15   |

|   |           |
|---|-----------|
| Southwestern Minnesota TZD Region Statistical Comparisons.....  | 18        |
| Graph 5: Southwestern Minnesota Region Fatal and Serious Injury Crashes/Fatalities and Serious Injuries ...       | 18        |
| Table 2: Southwestern Minnesota Region Comparison of Baseline to 2011.....  | 19        |
| Benefits and Persistent Challenges .....  | 19        |
| <br>  |           |
| <b>SOUTH CENTRAL TZD REGION .....</b>   | <b>20</b> |
| Introduction.....   | 20        |
| South Central Minnesota TZD Regional Evaluation Grid.....   | 21        |
| South Central Minnesota TZD Region Partnership Activities .....   | 23        |
| South Central TZD Region Statistical Comparisons.....   | 26        |
| Graph 6: South Central Region Fatal and Serious Injury Crashes/Fatalities and Serious Injuries.....               | 26        |
| Table 3: South Central Region Comparison of Baseline to 2011.....   | 27        |
| Benefits and Persistent Challenges .....  | 27        |
| <br>  |           |
| <b>NORTHWESTERN MINNESOTA TZD REGION .....</b>  | <b>29</b> |
| Introduction.....   | 29        |
| Northwestern Minnesota TZD Regional Evaluation Grid.....  | 30        |
| Northwestern Minnesota TZD Region Partnership Activities.....   | 32        |
| Northwestern Minnesota TZD Region Statistical Comparisons.....  | 35        |
| Graph 7: Northwestern Minnesota Region Fatal and Serious Injury Crashes/Fatalities and Serious Injuries ...       | 35        |
| Table 4: Northwestern Minnesota Region Comparison of Baseline to 2011.....  | 36        |
| Benefits and Persistent Challenges .....  | 36        |
| <br>  |           |
| <b>NORTHEASTERN MINNESOTA TZD REGION.....</b>   | <b>38</b> |
| Introduction.....   | 38        |
| Northeastern Minnesota TZD Regional Evaluation Grid.....  | 39        |
| Northeastern Minnesota TZD Region Partnership Activities.....   | 41        |
| Northeastern Minnesota TZD Region Statistical Comparisons.....  | 44        |
| Graph 8: Northeastern Minnesota TZD Region Fatal and Serious Injury Crashes/Fatalities and Serious Injuries ..... | 44        |
| Table 5: Northeastern Minnesota TZD Region Comparison of Baseline to 2011.....                                    | 45        |
| Benefits and Persistent Challenges .....  | 46        |
| <br>  |           |
| <b>SUMMARY.....</b>   | <b>47</b> |
| Graph 9: Percent Change in Traffic Fatalities by Age of Minnesota TZD Region .....                                | 48        |
| Graph 10: Percent Change in Traffic-related Serious Injuries by Age of TZD Region.....                            | 48        |
| <br>  |           |
| <b>CONCLUSION AND RECOMMENDATION .....</b>  | <b>49</b> |
| <br>  |           |
| <b>APPENDICES .....</b>   | <b>51</b> |
| Appendix A: Abbreviations and Acronyms .....  | 51        |

Appendix B: Map of Minnesota TZD Regions and Local Minnesota Traffic Safety Programs.....52  
Appendix C: Minnesota TZD Roadmap of Partners .....53  
Appendix D: 2011 and 2012 Safe and Sober Calendar .....54  
Appendix E: Minnesota Law Enforcement Liaisons .....56  
Appendix F: Designated Trauma Hospitals .....57  
Appendix G: Completed County Road Safety Plans.....58

REFERENCES ..... 59

# EXECUTIVE SUMMARY

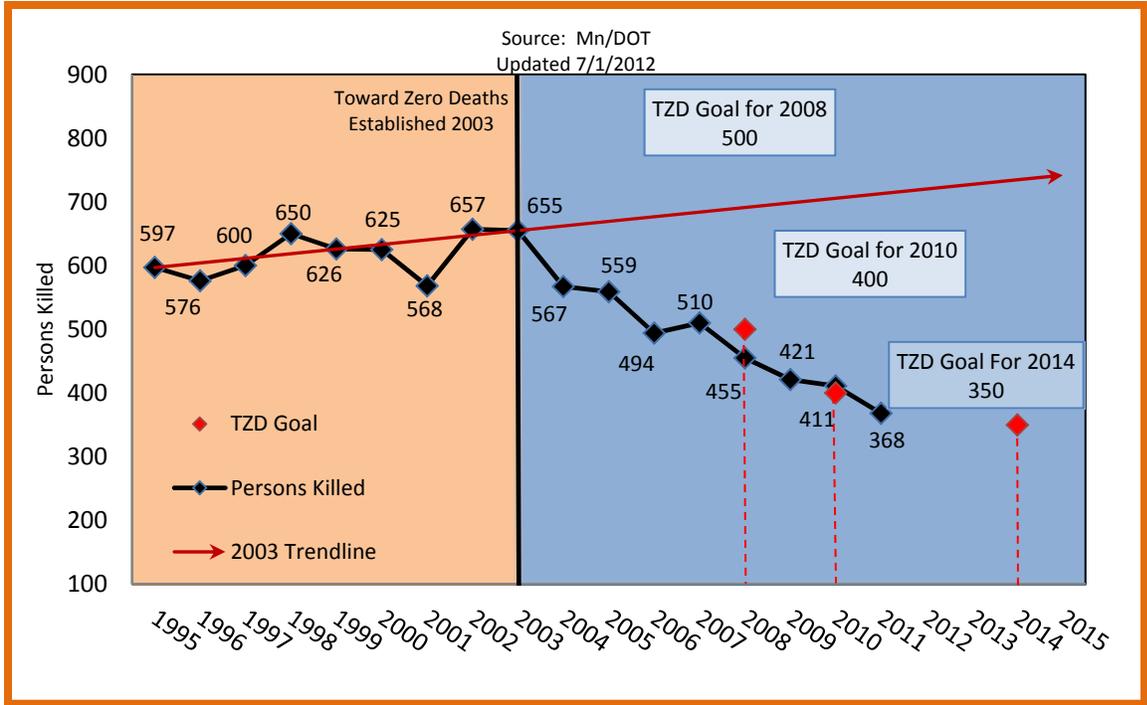
Minnesota’s Toward Zero Deaths (TZD) is a multidisciplinary, four “E” collaboration which includes *Enforcement, Education, Engineering, and Emergency Medical and Trauma Services*. TZD includes multiple state and local agencies, academia, the judicial system, traffic safety advocacy groups, and citizen groups. For a descriptive list of TZD partners, please see [Appendix C](#). The multifaceted approach to address traffic fatalities is based on international and national models.

**2012 TZD Regional Evaluation:**  
This is the first outcomes evaluation of Minnesota’s TZD efforts!

Both state and local traffic safety advocates have a long history of tirelessly working to address the needless deaths on Minnesota’s roadways. Those early advocates have coalesced under TZD Minnesota in 2003; their efforts, commitment, and passion are recognized building blocks for the elevated traffic safety discourse and positively impacted traffic fatalities.

Based on trends from 1995 to 2002, as shown in [Graph 1](#), Minnesota was projected to lose as many as 713 lives on our roadways in 2011 alone. However, since 2003, fatalities have dropped 44%! While great strides are being made, impaired driving and distracted driving are two behaviors that remain a persistent challenge for most TZD Regions followed by speeding and failure to use a seatbelt.

**GRAPH 1: MINNESOTA ROADWAY FATALITIES AND TOWARD ZERO DEATHS GOALS**



## REGIONAL PARTNERS

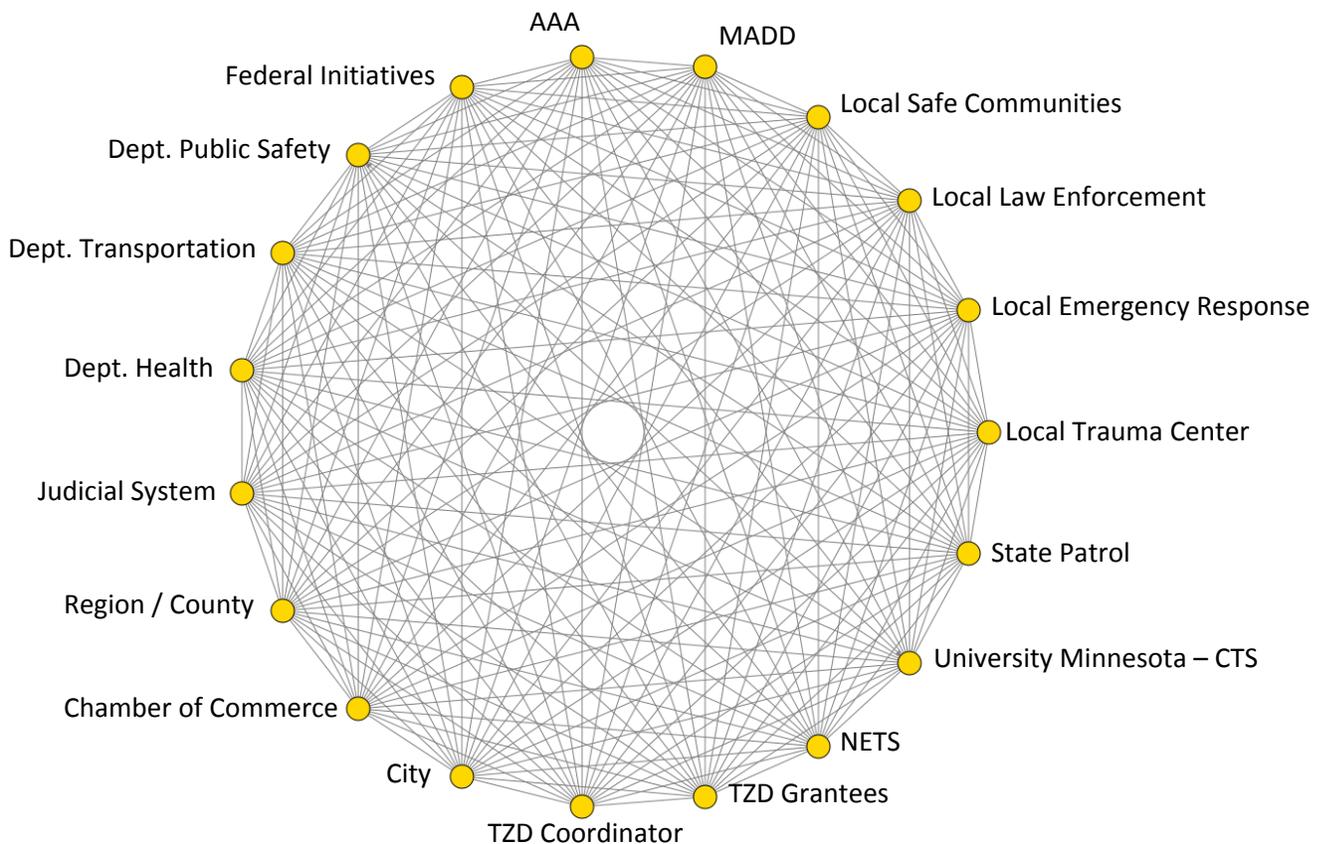
In order to promote the TZD efforts throughout the state, TZD Regions were established to support local partners. Currently, Minnesota is divided into six TZD Regions with one more region planned. By the end of 2012, each TZD Region will have a Regional Coordinator who supports local efforts, facilitates state wide efforts locally, and promotes the TZD Mission.

## A NETWORK OF TRAFFIC SAFETY ADVOCATES

Toward Zero Deaths provides structure to the network of traffic safety advocates. [Graph 2](#) depicts only a small sampling of the diversity of disciplines and traffic safety advocates that combine to create the structure for TZD Minnesota. An ideal TZD structure includes multiple connections among each node, so that if one organization is removed, the entire network does not fall into disarray.

Analysis of network maps, such as the one below, will identify and measure network integration of traffic safety advocates, partners, and stakeholders. Further analysis of TZD Regional networks are anticipated in future evaluations.

**GRAPH 2: AN IDEAL NETWORK OF TRAFFIC SAFETY ADVOCATES AND STAKEHOLDERS**

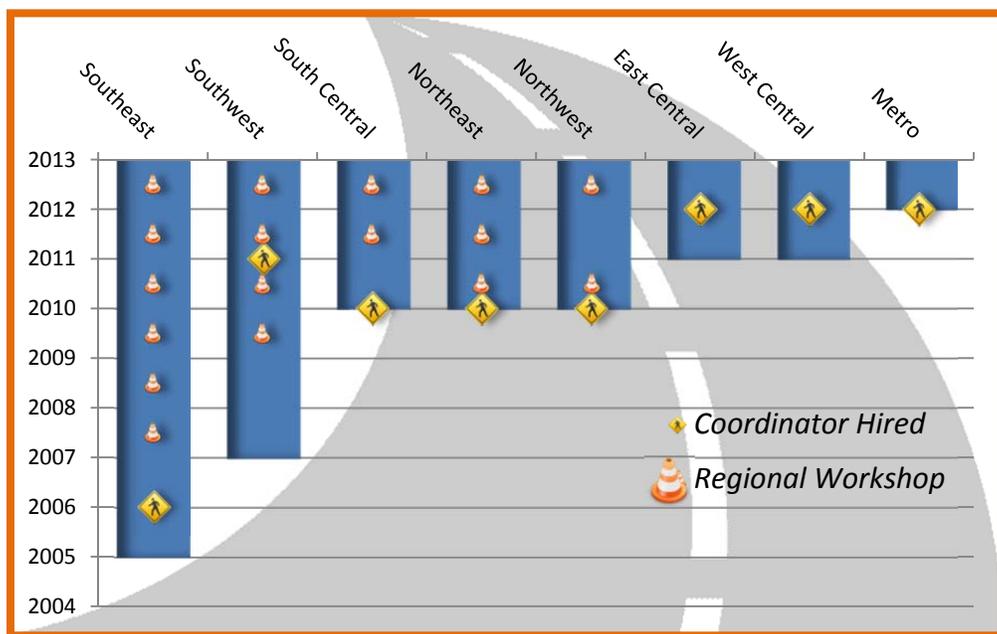


In reading this report, it is important to remember that some regions were established earlier than others. Furthermore, each region has benefitted from local safety advocates prior to the establishment of TZD and the TZD Regions. Regional efforts used for these analyses are limited to the 2011 calendar year. These reported efforts shown in this report are not an exhaustive list of all traffic safety initiatives, but do offer a snapshot of coordinated programming.

TZD Regional maturity and local traffic safety participation are strongly associated with regional traffic safety outcomes. Higher levels of county participation in traffic safety grants and Safety Plans is associated with positive traffic safety outcomes!

The TZD Regions and Regional Coordinators are indispensable to the TZD Mission and traffic safety outcomes. However, due to limited data availability, it was not possible to clearly identify specific types of services and activities that garner the greatest impact on traffic safety. Higher levels of regional participation are recommended by expanding outreach of grants, County Road Safety Plans, and further expansion of partnerships.

**GRAPH 3: MINNESOTA TZD REGIONS BY YEAR ESTABLISHED**



This report is the first effort to identify the relationship between regional Toward Zero Death efforts and traffic safety outcomes. In 2011, two more TZD Regions were organized in East Central and West Central Minnesota; by the end of 2012, the Minnesota Twin Cities Metro area will also have a TZD Coordinator. A new TZD Regional efforts database was developed in 2012, which will help accurately record the myriad of local traffic safety efforts by all four E's and regional strategic partners. Improvements in data availability and quality will foster more rigorous analyses for future evaluations of Minnesota TZD regional efforts.

# HOW TO READ THIS REPORT

---

## INTRODUCTION

In 2010 DPS and Mn/DOT collaborated to develop an evaluation plan by which to identify and measure the successes and challenges of the TZD Regions. Each region has its own strategic plan which is informed by the needs of the region. The *Regional Strategic Plan*<sup>1</sup> goals, in turn, inform the *Regional Evaluation Plan*<sup>2</sup>. The *Evaluation Plan* links each regional goal to the metric by which progress toward the goal is measured. This report aims to measure and identify the successes and challenges faced by each region in reaching its goals.

Each TZD Region's evaluation findings are presented in a single section. Each section includes an introduction to the TZD Region, evaluation grid, and statistical comparisons of fatal and serious injury crash reductions from the baseline period of 2006-2010 to 2011.

**TZD Mission:** To create a culture for which traffic fatalities and serious injuries are no longer acceptable through the integrated application of Education, Engineering, Enforcement, and Emergency medical and trauma services. These efforts will be driven by data, best practices, and research.

## THE EVALUATION GRID

The Regional Evaluation Grid combines that Region's Evaluation Plan goals, region specific baseline data (2006-2010), and the corresponding 2011 reported data. The far right column offers a quick summary of traffic safety outcomes and regional efforts.

## THE MEASURE OF SUCCESS

The *Strategic Plan* focuses on two areas of traffic safety improvements: (1) reduction of fatal and serious injury *crashes* (2) reduction of traffic-related fatalities and serious *injuries*. There are four emphasis areas for each *Regional Strategic Plan*: (1) improperly belted and unbelted roadway use, (2) driver impairment, (3) illegal or unsafe speeds, and (4) driver distraction.

One caveat regarding unbelted fatalities: the act of not wearing a seat belt alone does not change the likelihood of being involved in a crash, but it does increase the likelihood of death or injury. In order to assess gains in seat belt usage, unbelted fatalities and serious injuries must be considered in conjunction with seat belt usage rates.

---

<sup>1</sup> Regional Strategic Plans were collaboratively developed by Mn/DPS-OTS, Mn/DOT-OTST, and TZD Regional Coordinators using data provided by Mn/DPS-OTS Research Analysts.

<sup>2</sup> Regional Evaluation Plans were developed by Mn/DOT-OTST in collaboration with Mn/DPS-OTS, and TZD Regional Coordinators.

## STATISTICAL COMPARISONS

Statistical comparisons are presented in two locations: a bar graph showing changes in severe crashes and injuries and a table showing the specific crash types identified in each region's *Strategic Plan* and *Evaluation Plan*.

## METHODS

Comparisons reported as being *statistically significant* indicates that the difference between the baseline mean and the test year mean are consistent and profound enough to rule out random fluctuations. For the purposes of this evaluation the acceptable alpha level was adjusted to  $p \leq .10$  or a 90% confidence interval<sup>3</sup>. The statistical comparisons are summarized and key findings are provided at the end of each section.

For most analyses, the annualized baseline crash data for 2006-2010 were compared to the 2011 crash data using a paired t-test. The paired t-test is a hypothesis test that compares the difference of means between two samples (Blalock, 1972). The t- test is appropriate for comparing means from small samples<sup>4</sup> (Wackerly, Mendenhall III, & and Scheaffer, 2008). In this report, three statistics are reported for the t-test comparisons (Henkel, 1976):

- ❖ **Standard Deviation (*sd*)** - indicates the dispersion from the mean. A smaller *sd* indicates that the sample is tightly centered around the mean.
- ❖ **t Statistic (*t*)** - indicates the difference between the two samples, i.e. baseline to 2011 crashes weighted by the standard deviation of the mean. The greater the t-statistic the lower the *p* value.
- ❖ **Degrees of Freedom (*df*)** – indicates the weight of the tails in the corresponding Student's T Distribution. As the degrees of freedom increases, the distribution becomes more normalized.
- ❖ **Probability (*p*)** - indicates the likelihood that the observed difference between the two samples is due to random fluctuations. Lower *p* values indicate that the difference between the baseline crashes and the 2011 crashes was consistent and/or profound; thus implying there is a causal factor driving the change.

Abbreviations and acronyms are provided in [Appendices A](#)

---

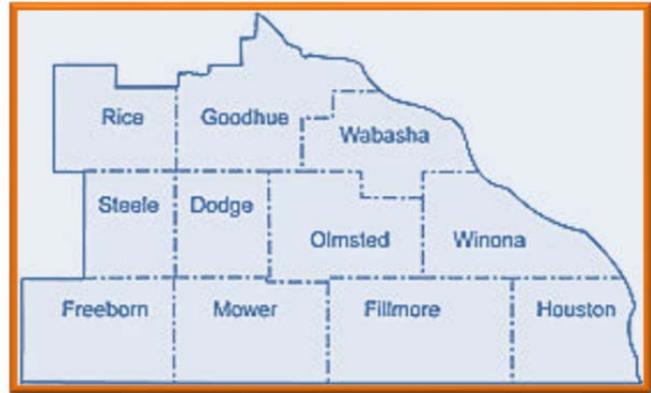
<sup>3</sup> The *alpha* is an arbitrarily selected probability tolerance. For these analyses, comparisons between the baselines (annualized 2006-2010) to the test year (2011) are considered statistically significant with a *p* of .10 or lower.

<sup>4</sup> Regional means are calculated as the average across the comprising counties, ranging from 8 to 14 counties.

# Southeastern Minnesota TZD Region

---

Traffic safety advocates in the eleven counties of Southeastern Minnesota have an extensive history of promoting traffic safety. By 2005, a coalition was formed whose goal was to reduce traffic fatalities and serious injuries and promote safety culture. This goal became the embodiment of the first TZD Regional program.



Beginning in 2006, a regional coordinator was employed to further develop partnerships in Education, Engineering, Enforcement, and Emergency medical and trauma service organizations in collaboration with the TZD Steering Committee.

The Southeastern Minnesota TZD Region aims to create a collaborative, comprehensive approach to reducing deaths and severe injuries. Since May 2007, the Region has facilitated this by sponsoring an annual workshop to encourage traffic safety as a priority for policymakers. These workshops are a forum for law enforcement, engineers, educators, emergency medical technicians, policymakers, businesses, and other traffic safety advocates to network, discuss, and spread the TZD program through communities in the region.

In 2010, the *Regional Strategic Plan* was revised in order to identify goals and strategies that best promote the TZD Mission. The 2010 *Regional Strategic Plan* was informed by regional crash data and best practices. Beyond regional workshops, the strategic plan calls for increased community awareness of TZD, requiring preparation of relevant local resources and regular update or enhancement of the TZD website. Steering Committee presentations and other networking events are encouraged to develop partnerships and relationships with community organizations and local government. Such presentations were instrumental in developing the driver behavior sections of the regional County Highway Safety Plans.

Collaboration through the Southeastern Minnesota TZD Region provides opportunities for mutual benefit and efficiency in employing resources.

## SOUTHEASTERN MINNESOTA TZD REGIONAL EVALUATION GRID

| TZD Partnership Goal  | Objective  | Baseline<br>2006-2010 Average   | 2011  | Progress   |
|---|--|---|---|--|
| 1. To continuously decrease traffic-related fatalities and serious injuries in Southeastern Minnesota | 1a. Continuously increase regional seatbelt use rates                              | According to the <i>2006 Southeastern Minnesota Region Seatbelt Survey</i> , 69.4% of roadway users were observed wearing a seatbelt. | According to the <i>2011 Southeastern Minnesota Region Seatbelt Survey</i> , 84.7% of roadway users were observed wearing a seatbelt. | 22% <b>increase</b> in observed seatbelt compliance.               |
|   | 1b. To examine the characteristics of the unbelted fatalities and serious injuries | 16 unbelted persons fatally injured.  | 8 unbelted persons fatally injured.   | 50% <b>reduction</b> of unbelted fatalities.                       |
|   |  | 42 unbelted persons seriously injured.  | 27 unbelted persons seriously injured.  | 36% <b>reduction</b> of unbelted serious injuries.                 |
|   | 1c. Continuously reduce the fatal and serious injury crashes                       | 52 fatal crashes.   | 37 fatal crashes.   | 29% <b>reduction</b> of fatal crashes.                             |
|   |  | 156 serious injury crashes.   | 94 serious injury crashes.  | 40% <b>reduction</b> of serious injury crashes.                    |
|   | 1d. Continuously reduce the number of traffic fatalities and serious injuries      | 58 persons fatally injured.   | 41 persons fatally injured.   | 29% <b>reduction</b> of traffic-related fatalities.                |
|   |  | 197 persons serious injured.  | 122 persons seriously injured.  | 38% <b>reduction</b> of traffic-related serious injuries.          |
|   | 1e. Continuously reduce alcohol fatal and serious injury crashes                   | 12 impairment-related fatal crashes.  | 7 impairment-related fatal crashes.   | 42% <b>reduction</b> of impairment-related fatal crashes.          |
|   |  | 33 impairment-related serious injury crashes.   | 17 impairment-related serious injury crashes.   | 48% <b>reduction</b> of impairment-related serious injury crashes. |

| TZD Partnership Goal | Objective   | Baseline<br>2006-2010 Average                        | 2011   | Progress  |
|----------------------|---|--|--|---|
|                      | 1f. Continuously reduce the number of alcohol-related traffic fatalities and serious injuries     | 14 fatalities in impairment-related crashes.         | 9 fatalities in impairment-related crashes.          | 36% <b>reduction</b> of fatalities in impairment-related crashes.         |
|                      |   | 42 seriously injured in impairment-related crashes.  | 26 seriously injured in impairment-related crashes.  | 38% <b>reduction</b> of seriously injured in impairment-related crashes.  |
|                      | 1g. Continuously reduce speed fatal and serious injury crashes                                    | 14 speed-related fatal crashes.                      | 8 speed-related fatal crashes.                       | 43% <b>reduction</b> of speed-related fatal crashes.                      |
|                      |   | 29 speed-related serious injury crashes.             | 21 speed-related serious injury crashes.             | 28% <b>reduction</b> of speed-related serious injury crashes.             |
|                      | 1h. Continuously reduce the number of speed-related traffic fatalities and serious injuries       | 26 fatalities in speed-related crashes.              | 15 fatalities in speed-related crashes.              | 42% <b>reduction</b> of fatalities in speed-related crashes.              |
|                      |   | 62 seriously injured in speed-related crashes.       | 35 seriously injured in speed-related crashes.       | 44% <b>reduction</b> of seriously injured in speed-related crashes.       |
|                      | 1i. Continuously reduce distraction-related fatal and serious injury crashes                      | 9 distraction-related fatal crashes.                 | 4 distraction-related fatal crashes.                 | 56% <b>reduction</b> of distraction-related fatal crashes.                |
|                      |   | 33 distraction-related serious injury crashes.       | 17 distraction-related serious injury crashes.       | 48% <b>reduction</b> of distraction-related serious injury crashes.       |
|                      | 1j. Continuously reduce the number of distraction-related traffic fatalities and serious injuries | 10 fatalities in distraction-related crashes.        | 5 fatalities in distraction-related crashes.         | 50% <b>reduction</b> of fatalities in distraction-related crashes.        |
|                      |   | 38 seriously injured in distraction-related crashes. | 20 seriously injured in distraction-related crashes. | 47% <b>reduction</b> of seriously injured in distraction-related crashes. |

Source: TIS Crash Data Exported 3/20/2012, Mn/DOT (crash level data); 4/13/2012, Mn/DOT (person level).

## SOUTHEASTERN MINNESOTA TZD REGION PARTNERSHIP ACTIVITIES

| TZD Partnership Goal  | Objective  | 2011 Efforts   |
|---|--|--|
| 2. To continuously increase TZD awareness and partnerships across Southeastern Minnesota for both the general public and traffic safety professionals | 2a. Establish the vision of TZD as a priority for all region, county, city government agencies | <ul style="list-style-type: none"> <li>• TZD Regional Coordinator’s outreach efforts added 56 more individuals who are now involved in the Regional TZD effort (Hernandez, 2011).</li> </ul>   |
|   | 2b. Create and strengthen partnerships in the region   | <ul style="list-style-type: none"> <li>• Participant in the EMS Regional Conference for the fourth consecutive year (Hernandez, 2011).</li> <li>• Provided ten presentations to Mn/DOT and stakeholders groups (Hernandez, 2011).</li> <li>• Attended or facilitated five other networking events (Hernandez, 2011).</li> <li>• 1 Regional Workshop held – 159 stakeholders attended (Hernandez, 2011).</li> </ul>   |
|   |  | <ul style="list-style-type: none"> <li>• 159 stakeholders involved in SE Region TZD Workshop, a 76% increase from 2005 (Hernandez, 2011).</li> <li>• 65 stakeholders attended the state TZD Conference (Hernandez, 2011).</li> <li>• Law Enforcement Liaison for southern Minnesota attended 3 coalition meetings (McConkey, 2012).<sup>5</sup></li> <li>• Law Enforcement Liaison for southern Minnesota attended 1 tribal meeting (McConkey, 2012).</li> </ul> |

<sup>5</sup>“Law enforcement liaisons (LELs) are a resource to local agencies regarding traffic enforcement programs and information. They are available to assist with informing governing bodies of the importance of traffic safety, motivating officers and contacting the media” (Department of Public Safety, 2012). Note: This position was filled in October 2011; activities presented only represent a partial year.

| TZD Partnership Goal | Objective  | 2011 Efforts  |
|----------------------|--|---|
|                      | 2c. Promote & implement effective traffic safety initiatives in the region | <ul style="list-style-type: none"> <li>• 10 of 11 counties have at least one OTS Safe Roads Grant in 2011 (Pehrson, 2012).<sup>6</sup></li> <li>• Nineteen media stories associated with TZD efforts within the region (10 newspaper and 9 TV reports) (Hernandez, 2011).</li> <li>• 46.6% of residents in Southeastern Minnesota Region report being aware of TZD (Accora Research, Inc., 2011).<sup>7</sup></li> <li>• 69 NETS presentations were provided (Kons, 2011).</li> <li>• Worksite Education Campaign Pilot Project expanded to include new partners (Hernandez, 2011).</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• 2 of 11 counties participate in the HEAT Program 2009-2012 (Fleming, 2012).<sup>8</sup></li> <li>• 9 of 11 counties had a TZD Enforcement Grant in 2011 (Swanson, 2012).<sup>9</sup></li> <li>• 5 enhanced enforcement provided in 9 counties in 2011 (Berger, 2012).<sup>10</sup></li> <li>• 4 activities to support enhanced enforcement (Hernandez, 2011).</li> <li>• 2 of 11 counties had a TZD Challenge Grant in 2011 (Swanson, 2012).<sup>11</sup></li> <li>• 1 kick-off meeting (Hernandez, 2011).</li> <li>• 3 media events organized for enhanced enforcement (Hernandez, 2011).</li> <li>• Law Enforcement Liaison for southern Minnesota attended 1 chiefs meeting (McConkey, 2012).</li> </ul> |

<sup>6</sup> TZD Safe Roads Program, formerly known as Safe Communities Programs, offers OTS grants to city and county agencies and organizations that aim to promote traffic safety awareness and address traffic safety behaviors such as impaired driving, distracted driving, and parental involvement with teen drivers (TZD Safe Roads Program, 2012).

<sup>7</sup> TZD Awareness is disaggregated from the Annual Mn/DOT Omnibus Survey (Accora Research, Inc., 2011).

<sup>8</sup> HEAT is a multi-year, enforcement and education campaign against aggressive traffic. This program is in partnership with Mn/DOT, MN DPS-OTS, MSP, and local law enforcement agencies (Mn/DOT-OTST, 2009).

<sup>9</sup> TZD Enforcement Grants are DPS-OTS funded enforcement and education projects which include projects formerly known as Night-Cap and Safe and Sober. Funds are available to local law enforcement agencies.

<sup>10</sup> Enforcement Waves include heightened enforcement and education funded through a TZD Enforcement Grant. See [Appendix D: Safe & Sober Enforcement Calendar](#) for more details.

<sup>11</sup> TZD Challenge Grant is a DPS-OTS funded grant for local law enforcement agencies for safety related equipment and addition traffic enforcement.

| TZD Partnership Goal | Objective | 2011 Efforts   |
|----------------------|-----------|--|
|                      |           | <ul style="list-style-type: none"> <li>• 11 of 11 <i>County Road Safety Plans</i> completed in 2010 (Leuer, 2012).<sup>12</sup></li> <li>• 9 Highway Safety Improvement Projects approved (Whitcher, 2012).<sup>13</sup></li> <li>• 1 Governor’s Initiative Project funded and installed (Fleming, 2012).<sup>14</sup></li> <li>• 7 Gap Projects funded and installed (Fleming, 2012).<sup>15</sup></li> </ul> |
|                      |           | <ul style="list-style-type: none"> <li>• First parent component developed course 1/18/11 for drivers’ education (Hernandez, 2011).</li> <li>• 15 driving schools surveyed reported being interested in developing parent component (Pehrson, 2012).<sup>16</sup></li> <li>• 1 high school seat belt enforcement and education wave (Hernandez, 2011).</li> </ul>   |
|                      |           | <ul style="list-style-type: none"> <li>• 12 Designated Trauma Centers in Southeastern Minnesota (Center for Transportation Studies, University of Minnesota, 2012).<sup>17</sup></li> </ul>  |

<sup>12</sup> County Road Safety Plans are data driven tools developed through Mn/DOT. They may be used to identify a specific set of low cost systematic safety projects linked directly to the causal factors associated with the most severe crashes on the County roadway system. The CRSP serve as a tool for local safety advocates focus on activities, programs, and initiatives that will impact the traffic safety issues relevant to the community (Mn/DOT-SALT, 2011)

<sup>13</sup> Highway Safety Improvement Project (HSIP) offers funding for low-cost road safety improvement countermeasures. Funds are available to Mn/DOT Districts, Minnesota counties, and cities in order to install engineering counter measures on the state roadway system and the local roadway system.

<sup>14</sup> Governor’s Initiative Projects Mn/DOT funded low-cost safety improvement installations on the state roadway system. Funds were made available in 2009 with installations to be completed by September 2011.

<sup>15</sup> Gap Projects are Mn/DOT funded low-cost safety improvement installations on the state roadway system. Funds were made available in 2009 with installations to be completed by September 2011.

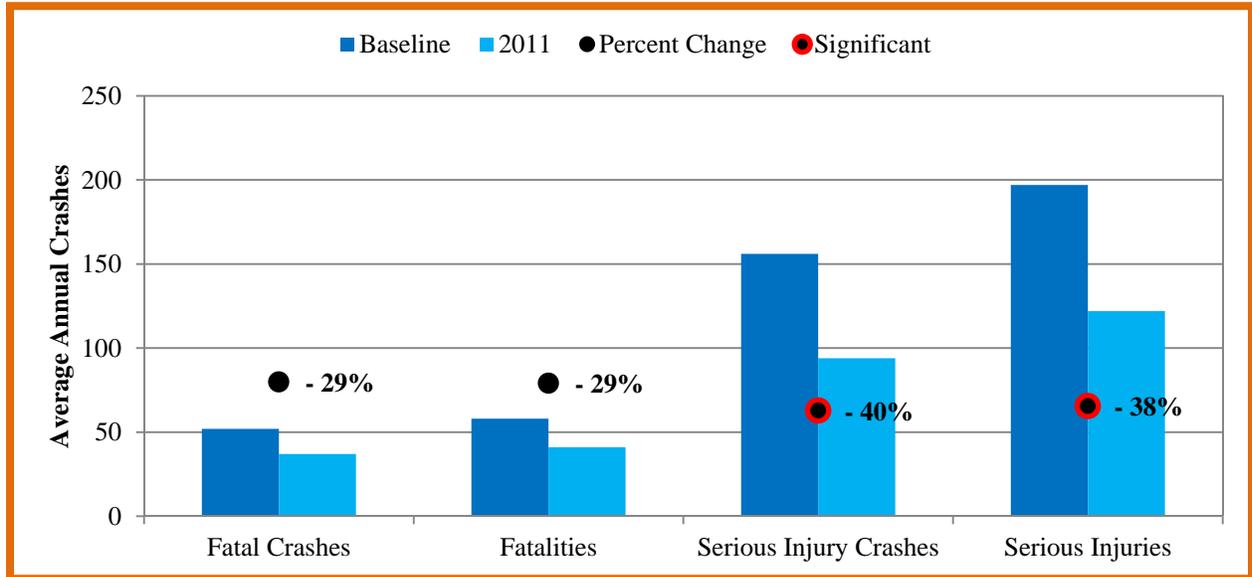
<sup>16</sup> Parent Education developed by DPS-OTS.

<sup>17</sup> As of August 2005, Minnesota has its own comprehensive statewide trauma system. The goal of the trauma system is to decrease time between injury and definitive care by ensuring that patients' medical needs are appropriately matched with hospitals' resources (Minnesota Department of Health, 2011).

## SOUTHEASTERN MINNESOTA TZD REGION STATISTICAL COMPARISONS

Through the hard work and dedication of all TZD stakeholders, the Southeastern Minnesota TZD Region has demonstrated tremendous growth and success in promoting safer roadways. [Graph 4](#) shows that roadway fatalities and fatal crashes in the Southeastern Minnesota region continue to trend downward. Additionally, reductions of serious injuries and serious injury crashes were statistically significantly at  $p \leq .10$ , which means there is a low probability that the changes were due to random fluctuations.

**GRAPH 4: SOUTHEASTERN MINNESOTA REGION FATAL AND SERIOUS INJURY CRASHES/FATALITIES AND SERIOUS INJURIES**



Source: TIS Crash Data Exported 3/20/2012, Mn/DOT (crash level data); 4/13/2012, Mn/DOT (person level).

The top three contributing factors of fatal and serious injury crashes are impairment, speeding, and distraction. Additionally, unbelted drivers continue to be at high risk of death or serious injury. Compared to the baseline period, in 2011:

- ❖ Seatbelt usage was up and unbelted fatal and serious injuries were down! There was a 22% increase in observed seat belt usage from 2006 to 2011 and a statistically significant reduction in unbelted fatalities, fatal crashes, serious injuries and serious crashes.
- ❖ Impaired driver crashes are mixed. Impairment-related fatal crashes and fatalities showed no statistically significant change; however, serious injury crashes and serious injuries were significantly reduced!
- ❖ There were five enhanced enforcement in the Southeastern Minnesota Region. Out of eleven counties, there are TZD Enforcement Grants in nine and HEAT zones in two. In 2011, there was a statistically significant reduction of speed-related fatal crashes, fatalities, serious injury crashes, and serious injuries!
- ❖ There was a statistically significant reduction of distraction-related fatalities, fatal crashes, serious injuries, and serious injury crashes!

**TABLE 1: SOUTHEASTERN MINNESOTA REGION COMPARISON OF BASELINE TO 2011**

| TZD Regional Objective              | Direction of Change | Standard Deviation (SD) | t statistic (df=10) | probability (p) <sup>18</sup> |
|-------------------------------------|---------------------|-------------------------|---------------------|-------------------------------|
| <b>Overall</b>                      |                     |                         |                     |                               |
| Fatal Crashes                       | Decreased           | 0.0599                  | -1.642              | 0.132                         |
| Serious Injury Crashes              | <b>Decreased</b>    | 0.0439                  | -4.867              | 0.001*                        |
| Fatalities                          | Decreased           | 0.0667                  | -1.619              | 0.137                         |
| Serious Injuries                    | <b>Decreased</b>    | 0.0483                  | -4.461              | 0.001*                        |
| <b>Unbelted</b>                     |                     |                         |                     |                               |
| Fatal Crashes <sup>a</sup>          | <b>Decreased</b>    | 0.0649                  | -1.940              | 0.081*                        |
| Serious Injury Crashes <sup>a</sup> | <b>Decreased</b>    | 0.0941                  | -2.815              | 0.018*                        |
| Fatalities                          | <b>Decreased</b>    | 0.0463                  | -3.735              | 0.004*                        |
| Serious Injuries                    | <b>Decreased</b>    | 0.0490                  | -3.058              | 0.012*                        |
| <b>Impairment-related</b>           |                     |                         |                     |                               |
| Fatal Crashes                       | Decreased           | 0.0688                  | -0.647              | 0.532                         |
| Serious Injury Crashes              | <b>Decreased</b>    | 0.0823                  | -2.680              | 0.023*                        |
| Fatalities                          | Decreased           | 0.0724                  | -0.605              | 0.559                         |
| Serious Injuries                    | <b>Decreased</b>    | 0.0939                  | -2.168              | 0.055*                        |
| <b>Speed-related</b>                |                     |                         |                     |                               |
| Fatal Crashes                       | <b>Decreased</b>    | 0.0473                  | -3.234              | 0.009*                        |
| Serious Injury Crashes              | <b>Decreased</b>    | 0.0402                  | -2.918              | 0.015*                        |
| Fatalities                          | <b>Decreased</b>    | 0.0690                  | -2.100              | 0.062*                        |
| Serious Injuries                    | <b>Decreased</b>    | 0.0946                  | -2.909              | 0.016*                        |
| <b>Distraction-related</b>          |                     |                         |                     |                               |
| Fatal Crashes                       | <b>Decreased</b>    | 0.0494                  | -2.743              | 0.021*                        |
| Serious Injury Crashes              | <b>Decreased</b>    | 0.0912                  | -2.370              | 0.039*                        |
| Fatalities                          | <b>Decreased</b>    | 0.0577                  | -2.305              | 0.044*                        |
| Serious Injuries                    | <b>Decreased</b>    | 0.0999                  | -2.357              | 0.040*                        |

Source: TIS Crash Data Exported 3/20/2012, Mn/DOT (crash level data); 4/13/2012, Mn/DOT (person level).

Notes: <sup>a</sup> Unbelted Crash Reductions are not part of the *Regional Strategic Plan*, but are presented here for continuity. <sup>b</sup> Paired Sample t-test was used to compare baseline (2006-2010) crash record data to 2011 crash record data. \*Denotes changes were statistically significant at  $p \leq .10$  or 90% confidence interval.

### BENEFITS AND PERSISTENT CHALLENGES

The Southeastern Minnesota TZD Region is the oldest TZD region in Minnesota. The cumulative effect of the Southeastern Minnesota TZD Regional Coordinator, regional partners and stakeholder’s endeavors showed a positive impact on traffic safety. Continued efforts are encouraged for ongoing reductions of traffic fatalities and serious injuries.

**Key Finding:** Southeastern Minnesota TZD Region is a mature region that has met every objective in its *Strategic Plan* and has made a significant contribution to the TZD Mission!

<sup>18</sup> See “How to Read This Report, Methods” for explanation of columns.

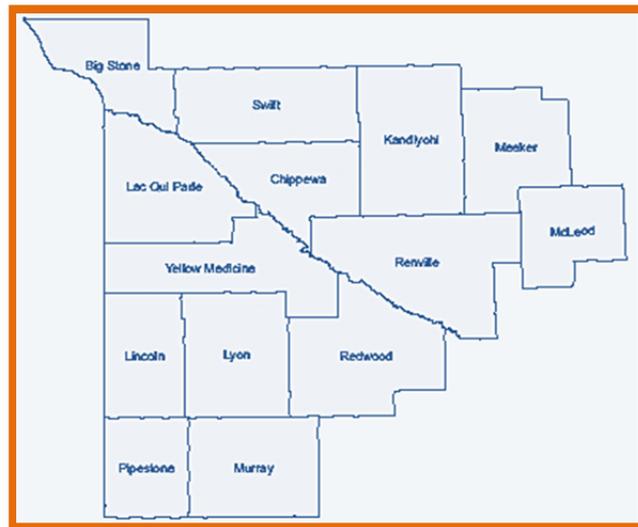
# SOUTHWESTERN MINNESOTA TZD REGION

---

Traffic safety advocates in the fourteen counties of Southwestern Minnesota have an extensive history of promoting traffic safety. By 2007, a coalition was formed whose goal was to reduce traffic fatalities and serious injuries and promote the TZD Mission.

Beginning in 2011, a regional coordinator was employed to further develop partnerships in **E**ducation, **E**ngineering, **E**nforcement, and **E**mergency medical and trauma service organizations.

In 2010, a Regional Strategic Plan was developed using regional crash data and current best practices. The Plan shaped goals and strategies in key areas to improve traffic safety.



There were 411 deaths on Minnesota roadways in 2010, 37 of these deaths occurred on Southwestern Minnesota roadways. Analyses of regional crash data highlighted the leading causes of traffic-related fatalities and severe injuries: improper or no seatbelt usage, driver impairment, illegal or unsafe speeds, and inattentive driving. Leading crash types for fatal or serious injury crashes involved run-off-roads and intersections related crashes.

The Southwestern Minnesota TZD initiative aims to create a collaborative, comprehensive approach to eliminate roadway deaths and severe injuries. Beginning April 2008, the Southwestern Minnesota TZD Region sponsored an annual workshop to promote traffic safety as a priority for policymakers. These workshops are a forum for law enforcement, engineers, educators, emergency medical technicians, policymakers, businesses, and other traffic safety advocates to understand traffic safety issues in the area, strengthen their commitment, and provide opportunities for community involvement.

Beyond regional workshops, the strategic plan calls for increased community awareness of TZD, requiring preparation of relevant local resources and regular update or enhancement of the TZD website. Steering Committee presentations and other networking events foster local partnerships in the TZD mission.

Traffic safety coalitions like the Kandiyohi Safe Communities Coalition, Marshall Area Traffic Safety Coalition, and South West Central Safe Communities Coalition provide natural, locally developed

partners. As the Southwestern Minnesota Region develops and grows, the partnerships made through regional TZD efforts bolster a positive traffic safety culture in Southwestern Minnesota.

## SOUTHWESTERN MINNESOTA TZD REGIONAL EVALUATION GRID

| TZD Partnership Goal  | Objective  | Baseline<br>2006-2010 Average                 | 2011  | Progress  |
|---|--|---|---|---|
| 1. To continuously decrease traffic-related fatalities and serious injuries in Southwestern Minnesota | 1a. Continuously increase regional seatbelt use rates                              | N/A   | May 2011, the seat belt compliance rate in Southwestern Minnesota was 81.1% | N/A   |
|   | 1b. To examine the characteristics of the unbelted fatalities and serious injuries | 7 unbelted persons fatally injured.           | 5 unbelted persons fatally injured.   | 29% <b>reduction</b> of unbelted fatalities.                      |
|   |  | 20 unbelted persons seriously injured.        | 9 unbelted persons seriously injured.                                       | 55% <b>reduction</b> of unbelted serious injuries.                |
|   | 1c. Continuously reduce the fatal and serious injury crashes                       | 33 fatal crashes.                             | 23 fatal crashes.   | 30% <b>reduction</b> of fatal crashes.                            |
|   |  | 82 serious injury crashes.                    | 56 serious injury crashes.  | 32% <b>reduction</b> of serious injury crashes.                   |
|   | 1d. Continuously reduce the number of traffic fatalities and serious injuries      | 37 persons fatally injured.                   | 28 persons fatally injured.   | 24% <b>reduction</b> of traffic-related fatalities.               |
|   |  | 110 persons seriously injured.                | 72 persons seriously injured.   | 35% <b>reduction</b> of traffic-related serious injuries.         |
|   | 1e. Continuously reduce alcohol fatal and serious injury crashes                   | 10 impairment-related fatal crashes.          | 5 impairment-related fatal crashes.   | 50% <b>reduction</b> of impairment-related fatal crashes.         |
|   |  | 17 impairment-related serious injury crashes. | 25 impairment-related serious injury crashes.                               | 47% <b>increase</b> of impairment-related serious injury crashes. |

| TZD Partnership Goal | Objective   | Baseline<br>2006-2010 Average                        | 2011   | Progress   |
|----------------------|---|--|--|--|
|                      | 1f. Continuously reduce the number of alcohol-related traffic fatalities and serious injuries     | 11 fatalities in impairment-related crashes.         | 6 fatalities in impairment-related crashes.          | 45% <b>reduction</b> of fatalities in impairment-related crashes.        |
|                      |   | 22 seriously injured in impairment-related crashes.  | 30 seriously injured in impairment-related crashes.  | 36% <b>increase</b> of seriously injured in impairment-related crashes.  |
|                      | 1g. Continuously reduce speed fatal and serious injury crashes                                    | 7 speed-related fatal crashes.                       | 4 speed-related fatal crashes.                       | 43% <b>reduction</b> of speed-related fatal crashes.                     |
|                      |   | 15 speed-related serious injury crashes.             | 8 speed-related serious injury crashes.              | 47% <b>reduction</b> of speed-related-serious injury crashes.            |
|                      | 1h. Continuously reduce the number of speed-related traffic fatalities and serious injuries       | 19 fatalities in speed-related crashes.              | 11 fatalities in speed-related crashes.              | 42% <b>reduction</b> of fatalities in speed-related crashes.             |
|                      |   | 51 seriously injured in speed-related crashes.       | 33 seriously injured in speed-related crashes.       | 35% <b>reduction</b> of seriously injured in speed-related crashes.      |
|                      | 1i. Continuously reduce distraction-related fatal and serious injury crashes                      | 3 distraction-related fatal crashes.                 | 4 distraction-related fatal crashes.                 | 33% <b>increase</b> of distraction-related fatal crashes.                |
|                      |   | 18 distraction-related serious injury crashes.       | 18 distraction-related serious injury crashes.       | <b>No change</b> of distraction-related serious injury crashes.          |
|                      | 1j. Continuously reduce the number of distraction-related traffic fatalities and serious injuries | 4 fatalities in distraction-related crashes.         | 4 fatalities in distraction-related crashes.         | <b>No change</b> of fatalities in distraction-related crashes.           |
|                      |   | 21 seriously injured in distraction-related crashes. | 20 seriously injured in distraction-related crashes. | 5% <b>reduction</b> of seriously injured in distraction-related crashes. |

Source: TIS Crash Data Exported 3/20/2012, Mn/DOT (crash level data); 4/13/2012, Mn/DOT (person level).

## SOUTHWESTERN MINNESOTA TZD REGION PARTNERSHIP ACTIVITIES

| TZD Partnership Goal  | Objective  | 2011 Efforts  |
|---|--|---|
| 2. To continuously increase TZD awareness and partnerships across SW Minnesota for both the general public and traffic safety professionals | 2a. Establish the vision of TZD as a priority for all region, county, city government agencies | <ul style="list-style-type: none"> <li>• 74 safety partners added in contacts (Roggenbuck, 2011).</li> <li>• Presentations (7) to Mn/DOT and stakeholders HSIP Coordinator (Roggenbuck, 2011).</li> <li>• 6 meetings of Steering Committee including county commissioners, legislators, county attorney (Roggenbuck, 2011).</li> <li>• One Regional Workshop held (Roggenbuck, 2011).</li> </ul>  |
|   | 2b. Create and strengthen partnerships in the region   | <ul style="list-style-type: none"> <li>• 3 local coalitions are member of steering committee (Kandiyohi Safe Community Coalition, Marshall Area Safety Coalition, and South West Central Safe Community Coalition) (Roggenbuck, 2011).</li> <li>• Attended EMS regional meetings and presented at Mankato Employee Safety Day (Roggenbuck, 2011).</li> <li>• Commitment of 78 individuals to aid TZD program (Roggenbuck, 2011).</li> <li>• Drafted 11 samples workplace policy for distracted driving (Roggenbuck, 2011).</li> </ul> |
|   |  | <ul style="list-style-type: none"> <li>• 106 stakeholders involved in SW Region TZD Workshop (Roggenbuck, 2011).</li> <li>• 47 regional stakeholders attended the TZD State Conference (Kirk, 2012).</li> <li>• Law Enforcement Liaison for southern Minnesota attended 3 coalition meetings (McConkey, 2012).<sup>19</sup></li> <li>• Law Enforcement Liaison for southern Minnesota attended 1 tribal meeting (McConkey, 2012).</li> </ul>  |
|   |  | <ul style="list-style-type: none"> <li>• 7 persons involved in steering committee workshop (Roggenbuck, 2011).</li> </ul>   |

<sup>19</sup>“Law enforcement liaisons (LELs) are a resource to local agencies regarding traffic enforcement programs and information. They are available to assist with informing governing bodies of the importance of traffic safety, motivating officers and contacting the media” (Department of Public Safety, 2012). Note: This position was filled in October 2011; activities presented only represent a partial year.

| TZD Partnership Goal | Objective  | 2011 Efforts  |
|----------------------|--|---|
|                      | 2c. Promote & implement effective traffic safety initiatives in the region | <ul style="list-style-type: none"> <li>• 1 of 14 Counties had a TZD Safe Roads Grant in 2011 (Pehrson, 2012).<sup>20</sup> Develop and distribute one-pager on Regional TZD plan (Roggenbuck, 2011).</li> <li>• Data collection for baseline regional seatbelt usage (Roggenbuck, Southwestern Minnesota Toward Zero Deaths Region Annual Report 2010-2011, 2011).</li> <li>• 2 supporting activities for enhanced enforcement (Roggenbuck, 2011).</li> <li>• Seatbelt checks partnering with Mn/DOT and State Patrol (Roggenbuck, 2011).</li> <li>• Co-sponsor with South Central Sept. impaired driving enforcement wave news conference (Roggenbuck, 2011).</li> <li>• 14.7% of residents in Southwestern Minnesota Region report being aware of TZD (Accora Research, Inc., 2011).<sup>21</sup></li> </ul> <hr/> <ul style="list-style-type: none"> <li>• 3 of 14 Counties participated in the HEAT Program 2009-2012 (Fleming, 2012).<sup>22</sup></li> <li>• 7 of 14 Counties had a TZD Enforcement Grant 2011 (Swanson, 2012).<sup>23</sup></li> <li>• 5 enhanced enforcement provided in 7 counties in 2011 (Berger, 2012).<sup>24</sup></li> <li>• 3 of 14 Counties had a TZD Challenge Grant in 2011 (Swanson, 2012).<sup>25</sup></li> <li>• Law Enforcement Liaison for southern Minnesota attended 1 chiefs meeting (McConkey, 2012).</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• 21 Designated Trauma Centers in Southwestern Minnesota (Center for Transportation Studies, University of Minnesota, 2012).<sup>26</sup></li> </ul> |

<sup>20</sup> TZD Safe Roads Program, formerly known as Safe Communities Programs, is coalitions of agencies and organizations that aim to address traffic safety issues (TZD Safe Roads Program, 2012).

<sup>21</sup> TZD Awareness is disaggregated from the Annual Mn/DOT Omnibus Survey (Accora Research, Inc., 2011).

<sup>22</sup> HEAT is a multi-year, enforcement and education campaign against aggressive traffic. This program is in partnership with Mn/DOT, MN DPS-OTS, MSP, and local law enforcement agencies (Mn/DOT-OTST, 2009).

<sup>23</sup> TZD Enforcement Grants are DPS-OTS funded enforcement and education projects which include projects formerly known as Night-Cap and Safe and Sober. Funds are available to local law enforcement agencies.

<sup>24</sup> Enforcement Waves include heightened enforcement and education funded through a TZD Enforcement Grant. See [Safe & Sober Enforcement Calendar](#) for more details.

<sup>25</sup> TZD Challenge Grant is a DPS-OTS funded grant for local law enforcement agencies for safety related equipment and addition traffic enforcement.

<sup>26</sup> As of August 2005, Minnesota has its own comprehensive statewide trauma system. The goal of the trauma system is to decrease time between injury and definitive care by ensuring that patients' medical needs are appropriately matched with hospitals' resources (Minnesota Department of Health, 2011).

| TZD Partnership Goal | Objective | 2011 Efforts  |
|----------------------|-----------|---|
|                      |           | <ul style="list-style-type: none"> <li>• 12 of 14 CRSP completed in 2011 (Leuer, 2012).<sup>27</sup></li> <li>• 7 Highway Safety Improvement Projects approved (Whitcher, 2012).<sup>28</sup></li> <li>• 1 Governor’s Initiative Project funded and installed (Fleming, 2012).<sup>29</sup></li> <li>• 1 Gap Projects funded and installed (Fleming, 2012).<sup>30</sup></li> </ul> |
|                      |           | <ul style="list-style-type: none"> <li>• 2 Driver Education Schools surveyed, report having a parent education component as part of their curriculum (Pehrson, 2012).<sup>31</sup></li> </ul>   |

<sup>27</sup> County Road Safety Plans are data driven tools developed through Mn/DOT. They may be used to identify a specific set of low-cost systematic safety projects linked directly to the causal factors associated with the most severe crashes on the County roadway system. The CRSP serve as a tool for local safety advocates focus on activities, programs, and initiatives that will impact the traffic safety issues relevant to the community (Mn/DOT-SALT, 2011)

<sup>28</sup> Highway Safety Improvement Project (HSIP) offers funding for low-cost road safety improvement countermeasures. Funds are available to Mn/DOT Districts, Minnesota counties, and cities in order to install engineering counter measures on the state roadway system and the local roadway system.

<sup>29</sup> Governor’s Initiative Projects Mn/DOT funded low-cost safety improvement installations on the state roadway system. Funds were made available in 2009 with installations to be completed by September 2011.

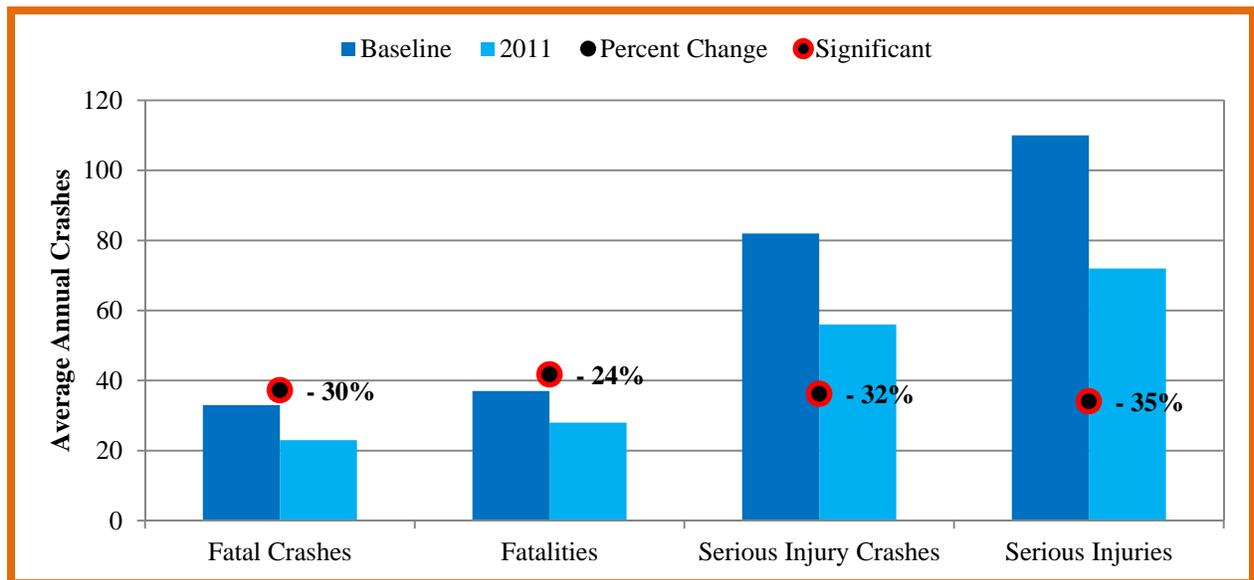
<sup>30</sup> Gap Projects are Mn/DOT funded low-cost safety improvement installations on the state roadway system. Funds were made available in 2009 with installations to be completed by September 2011.

<sup>31</sup> Parent Education developed by DPS-OTS.

## SOUTHWESTERN MINNESOTA TZD REGION STATISTICAL COMPARISONS

Through the hard work and dedication of all TZD stakeholders, the Southwestern Minnesota TZD Region has demonstrated tremendous growth and success in promoting safer roadways. [Graph 5](#) shows that changes in roadway fatalities, fatal crashes, serious injuries, and serious injury crashes were significantly reduced at  $p \leq .10$ , which means there is a low probability that the changes were due to random fluctuations.

**GRAPH 5: SOUTHWESTERN MINNESOTA REGION FATAL AND SERIOUS INJURY CRASHES/FATALITIES AND SERIOUS INJURIES**



Source: TIS Crash Data Exported 3/20/2012, Mn/DOT (crash level data); 4/13/2012, Mn/DOT (person level).

The top three contributing factors of fatal and serious injury crashes are impairment, speeding, and distraction. Additionally, unbelted drivers continue to be at high risk of death or serious injury. Compared to the baseline period in 2011:

- ❖ Observed seatbelt usage was at 81.1% fatal crashes and serious injuries were down! There was a statistically significant reduction in unbelted fatalities and serious injuries.
- ❖ Impaired driver crashes are mixed. Impairment-related fatal crashes and fatalities trended downward; however, serious injury crashes and serious injuries trended upward.
- ❖ There were two enhanced enforcement in the Southwestern Minnesota Region. Out of fourteen counties, there are enforcement grants in nine and HEAT zones in three. In 2011, there was a statistically significant reduction of speed-related fatalities, serious injury crashes, and serious injuries!
- ❖ No significant change in distracted driver crashes or injuries.

**TABLE 2: SOUTHWESTERN MINNESOTA REGION COMPARISON OF BASELINE TO 2011**

| TZD Regional Objective              | Direction of Change | Standard Deviation (SD) | t statistic (df=13) | probability (p) <sup>32</sup> |
|-------------------------------------|---------------------|-------------------------|---------------------|-------------------------------|
| <b>Overall</b>                      |                     |                         |                     |                               |
| Fatal Crashes                       | <b>Decreased</b>    | 0.0456                  | -2.712              | 0.018*                        |
| Serious Injury Crashes              | <b>Decreased</b>    | 0.0784                  | -2.128              | 0.053*                        |
| Fatalities                          | <b>Decreased</b>    | 0.0548                  | -2.179              | 0.048*                        |
| Serious Injuries                    | <b>Decreased</b>    | 0.0903                  | -2.160              | 0.050*                        |
| <b>Unbelted</b>                     |                     |                         |                     |                               |
| Fatal Crashes <sup>a</sup>          | <b>Decreased</b>    | 0.0506                  | -2.502              | 0.026*                        |
| Serious Injury Crashes <sup>a</sup> | Decreased           | 0.0800                  | -1.288              | 0.220                         |
| Fatalities                          | Decreased           | 0.0603                  | -1.212              | 0.247                         |
| Serious Injuries                    | <b>Decreased</b>    | 0.0789                  | -2.422              | 0.031*                        |
| <b>Impairment-related</b>           |                     |                         |                     |                               |
| Fatal Crashes                       | Decreased           | 0.0419                  | -1.639              | 0.125                         |
| Serious Injury Crashes              | Increased           | 0.0757                  | +0.686              | 0.505                         |
| Fatalities                          | Decreased           | 0.0492                  | -1.273              | 0.225                         |
| Serious Injuries                    | Increased           | 0.0913                  | +0.214              | 0.834                         |
| <b>Speed-related</b>                |                     |                         |                     |                               |
| Fatal Crashes                       | Decreased           | 0.0499                  | -1.668              | 0.119                         |
| Serious Injury Crashes              | <b>Decreased</b>    | 0.0686                  | -2.142              | 0.052*                        |
| Fatalities                          | <b>Decreased</b>    | 0.0533                  | -2.787              | 0.015*                        |
| Serious Injuries                    | <b>Decreased</b>    | 0.0949                  | -1.760              | 0.102*                        |
| <b>Distraction-related</b>          |                     |                         |                     |                               |
| Fatal Crashes                       | Increased           | 0.0439                  | +0.045              | 0.965                         |
| Serious Injury Crashes              | No Change           | 0.0564                  | -0.170              | 0.868                         |
| Fatalities                          | No Change           | 0.0472                  | -0.258              | 0.801                         |
| Serious Injuries                    | Decreased           | 0.0547                  | -0.467              | 0.648                         |

Source: TIS Crash Data Exported 3/20/2012, Mn/DOT (crash level data); 4/13/2012, Mn/DOT (person level).

Notes: <sup>a</sup> Unbelted Crash Reductions are not part of the *Regional Strategic Plan*, but are presented here for continuity. <sup>b</sup> Paired Sample t-test was used to compare baseline (2006-2010) crash record data to 2011 crash record data. \*Denotes changes were statistically significant at  $p \leq .10$  or 90% confidence interval.

### BENEFITS AND PERSISTENT CHALLENGES

The Southwestern Minnesota TZD Region was established in 2007. The cumulative effect of the Southwestern Minnesota TZD Regional Coordinator’s, regional partners’ and stakeholders’ efforts showed a positive impact on most areas of traffic safety. Both impairment and distraction appear to be serious and persistent challenges in the Southwestern Minnesota TZD Region.

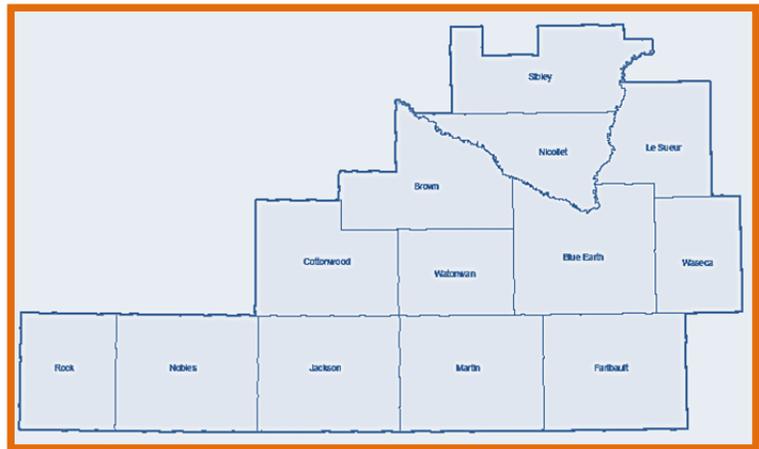
**Key Finding:** Southwestern Minnesota TZD Region is an older region that has met thirteen of eighteen objectives in its *Strategic Plan*.

<sup>32</sup> See “How to Read This Report, Methods” for explanation of columns.

# SOUTH CENTRAL TZD REGION

---

Traffic safety advocates in the thirteen counties of South Central Minnesota have an extensive history of promoting traffic safety. By 2010, a coalition was formed whose goal was to reduce traffic fatalities and serious injuries and promote the TZD Mission. That same year, a regional coordinator was hired to further develop partnerships in **E**ducation, **E**ngineering, **E**nforcement, and **E**mergency medical and trauma service organizations as a TZD Region.



There were 411 deaths on Minnesota roadways in 2010, 49 of these deaths occurred on south central Minnesota roadways. Regional analysis highlighted the leading causes of traffic-related fatalities and severe injuries: improper seatbelt use, driver impairment, illegal or unsafe speeds, and inattentive driving. Leading crash types for fatal or serious injury crashes involved run-off-roads and intersections.

The South Central Minnesota TZD initiative aims to create a collaborative, comprehensive approach to reducing deaths and severe injuries. Beginning in April 2012, the region facilitated this by sponsoring an annual workshop to encourage traffic safety as a priority for policymakers. These workshops are a forum for law enforcement, engineers, educators, emergency medical technicians, policymakers, businesses, and other traffic safety advocates to understand traffic safety issues in the area, strengthen their commitment, and provide opportunities for community involvement.

Beyond regional workshops, the strategic plan calls for increased community awareness of TZD, requiring preparation of relevant local resources and regular update or enhancement of the TZD website. Steering Committee presentations and other networking events foster local partnerships in the TZD mission. Collaboration through the South Central TZD Region provides opportunities for mutual benefit and efficiency in employing resources.

## SOUTH CENTRAL MINNESOTA TZD REGIONAL EVALUATION GRID

| TZD Partnership Goal   | Objective  | Baseline 2006-2010 Average                    | 2011   | Progress   |
|--|--|---|--|--|
| 1. To continuously decrease traffic-related fatalities and serious injuries in South Central Minnesota | 1a. Continuously increase regional seatbelt use rates                              | N/A   | May 2011, the seat belt compliance rate in south central Minnesota was 73.2% | N/A  |
|  | 1b. To examine the characteristics of the unbelted fatalities and serious injuries | 8 unbelted persons fatally injured.           | 4 unbelted persons fatally injured.  | 50% <b>reduction</b> of unbelted fatalities.                       |
|  |  | 20 unbelted persons seriously injured.        | 18 unbelted persons seriously injured.                                       | 10% <b>reduction</b> of unbelted serious injuries.                 |
|  | 1c. Continuously reduce the fatal and serious injury crashes                       | 34 fatal crashes.                             | 35 fatal crashes.  | 3% <b>increase</b> of fatal crashes.                               |
|  |  | 82 serious injury crashes.                    | 58 serious injury crashes.   | 29% <b>reduction</b> of serious injury crashes.                    |
|  | 1d. Continuously reduce the number of traffic fatalities and serious injuries      | 39 persons fatally injured.                   | 41 persons fatally injured.  | 5% <b>increase</b> of traffic-related-fatalities.                  |
|  |  | 104 persons seriously injured.                | 91 persons seriously injured.  | 13% <b>reduction</b> of traffic-related serious injuries.          |
|  | 1e. Continuously reduce alcohol fatal and serious injury crashes                   | 10 impairment-related fatal crashes.          | 5 impairment-related fatal crashes.  | 50% <b>reduction</b> of impairment-related fatal crashes.          |
|  |  | 22 impairment-related serious injury crashes. | 13 impairment-related serious injury crashes.                                | 41% <b>reduction</b> of impairment-related serious injury crashes. |

| TZD Partnership Goal | Objective   | Baseline   | 2011   | Progress   |
|----------------------|---|--|--|--|
|                      |   | 2006-2010 Average                                    |  |  |
|                      | 1f. Continuously reduce the number of alcohol-related traffic fatalities and serious injuries     | 12 fatalities in impairment-related crashes.         | 6 fatalities in impairment-related crashes.          | 50% <b>reduction</b> of fatalities in impairment-related crashes.        |
|                      |   | 25 seriously injured in impairment-related crashes.  | 18 seriously injured in impairment-related crashes.  | 28% <b>reduction</b> of seriously injured in impairment-related crashes. |
|                      | 1g. Continuously reduce speed fatal and serious injury crashes                                    | 7 speed-related fatal crashes.                       | 4 speed-related fatal crashes.                       | 43% <b>reduction</b> of speed-related fatal crashes.                     |
|                      |   | 16 speed-related serious injury crashes.             | 11 speed-related serious injury crashes.             | 31% <b>reduction</b> of speed-related serious injury crashes.            |
|                      | 1h. Continuously reduce the number of speed-related traffic fatalities and serious injuries       | 17 fatalities in speed-related crashes.              | 18 fatalities in speed-related crashes.              | 6% <b>increase</b> of fatalities in speed-related crashes.               |
|                      |   | 37 seriously injured in speed-related crashes.       | 28 seriously injured in speed-related crashes.       | 24% <b>reduction</b> of seriously injured in speed-related crashes.      |
|                      | 1i. Continuously reduce distraction-related fatal and serious injury crashes                      | 7 distraction-related fatal crashes.                 | 4 distraction-related fatal crashes.                 | 43% <b>reduction</b> of distraction-related fatal crashes.               |
|                      |   | 20 distraction-related serious injury crashes.       | 10 distraction-related serious injury crashes.       | 50% <b>reduction</b> of distraction-related serious injury crashes.      |
|                      | 1j. Continuously reduce the number of distraction-related traffic fatalities and serious injuries | 8 fatalities in distraction-related crashes.         | 5 fatalities in distraction-related crashes.         | 38% <b>reduction</b> of fatalities in distraction-related crashes.       |
|                      |   | 23 seriously injured in distraction-related crashes. | 22 seriously injured in distraction-related crashes. | 4% <b>reduction</b> of seriously injured in distraction-related crashes. |

Source: TIS Crash Data Exported 3/20/2012, Mn/DOT (crash level data); 4/13/2012, Mn/DOT (person level).

## SOUTH CENTRAL MINNESOTA TZD REGION PARTNERSHIP ACTIVITIES

| TZD Partnership Goal   | Objective  | 2011 Efforts   |
|--|--|--|
| 2. To continuously increase TZD awareness and partnerships across South Central Minnesota for both the general public and traffic safety professionals | 2a. Establish the vision of TZD as a priority for all region, county, city government agencies | <ul style="list-style-type: none"> <li>• Invitations to all County Highway Engineers and County Commissioners to Steering Committee meetings (Roggenbuck, South Central Minnesota Toward Zero Deaths Region Annual Report 2010-11, 2011).</li> <li>• 5 presentations to Mn/DOT and stakeholders (Roggenbuck, 2011).</li> <li>• Meetings with Martin County and Fairmont City law enforcement and engineers (Roggenbuck, 2011).</li> </ul>  |
|  | 2b. Create and strengthen partnerships in the region   | <ul style="list-style-type: none"> <li>• 62 new traffic safety partners (Roggenbuck, 2011).</li> <li>• Initial meeting of Steering Committee; planned spring 2012 workshop (Roggenbuck, 2011).</li> <li>• Developed/distributed <i>South Central Minnesota TZD Strategic Plan</i>.</li> </ul>  |
|  | 2c. Promote & implement effective traffic safety initiatives in the region                     | <ul style="list-style-type: none"> <li>• 40 Stakeholders attended State TZD Conference (Kirk, 2012).</li> <li>• Collected seatbelt baseline data (Roggenbuck, 2011).</li> <li>• Developed/distributed one-pager and PowerPoint on the regional TZD initiative (Roggenbuck, 2011).</li> <li>• Co-sponsor news conference for Sept. impaired driving enforcement wave (Roggenbuck, 2011).</li> <li>• Joint press release highlighting enforcement and engineering efforts for Aug. Ted Foss Move-Over Day (Roggenbuck, 2011).</li> <li>• “Young Forever” presentations by State Patrol and Minnesota EMS Systems to 13 high schools (Roggenbuck, 2011).</li> <li>• 22.3% of residents in South Central Minnesota Region report being aware of TZD (Accora Research, Inc., 2011).<sup>33</sup></li> </ul> |

<sup>33</sup> TZD Awareness is disaggregated from the Annual Mn/DOT Omnibus Survey (Accora Research, Inc., 2011).

| TZD Partnership Goal | Objective | 2011 Efforts   |
|----------------------|-----------|--|
|                      |           | <ul style="list-style-type: none"> <li>• 3 of 13 Counties participated in the HEAT Program 2009-2012 (Fleming, 2012).<sup>34</sup></li> <li>• 8 of 13 Counties had a TZD Enforcement Grant in 2011 (Swanson, 2012).<sup>35</sup></li> <li>• 5 enhanced enforcement provided in 8 counties in 2011 (Berger, 2012).<sup>36</sup></li> <li>• 1 of 13 Counties had a TZD Challenge Grant in 2011 (Swanson, 2012).<sup>37</sup></li> <li>• Held news conference to support the September Distracted Driving Enforcement Wave (Roggenbuck, South Central Minnesota Toward Zero Deaths Region Annual Report 2010-11, 2011).</li> <li>• Law Enforcement Liaison for southern Minnesota attended 3 coalition meetings (McConkey, 2012).<sup>38</sup></li> <li>• Law Enforcement Liaison for southern Minnesota attended 1 tribal meeting (McConkey, 2012).</li> </ul> |
|                      |           | <ul style="list-style-type: none"> <li>• 13 of 13 CRSP completed in 2011 (Leuer, 2012).<sup>39</sup></li> <li>• 1 Governor’s Initiative Project funded and installed (Whitcher, 2012).<sup>40</sup></li> <li>• 7 Gap Projects funded and installed (Fleming, 2012)<sup>41</sup></li> </ul>   |
|                      |           | <ul style="list-style-type: none"> <li>• 7 Driver Education Schools report including a parent education component in their curriculum (Pehrson, 2012).<sup>42</sup></li> </ul>   |

<sup>34</sup> HEAT is a multi-year, enforcement and education campaign against aggressive traffic. This program is in partnership with Mn/DOT, MN DPS-OTS, MSP, and local law enforcement agencies (Mn/DOT-OTST, 2009).

<sup>35</sup> TZD Enforcement Grants are DPS-OTS funded enforcement and education projects which include projects formerly known as Night-Cap and Safe and Sober. Funds are available to local law enforcement agencies.

<sup>36</sup> Enforcement Waves include heightened enforcement and education funded through a TZD Enforcement Grant. See [Safe & Sober Enforcement Calendar](#) for more details.

<sup>37</sup> TZD Challenge Grant is a DPS-OTS funded grant for local law enforcement agencies for safety related equipment and addition traffic enforcement.

<sup>38</sup>“Law enforcement liaisons (LELs) are a resource to local agencies regarding traffic enforcement programs and information. They are available to assist with informing governing bodies of the importance of traffic safety, motivating officers and contacting the media” (Department of Public Safety, 2012). Note: This position was filled in October 2011; activities presented only represent a partial year.

<sup>39</sup> County Road Safety Plans are data driven tools developed through Mn/DOT. They may be used to identify a specific set of low-cost systematic safety projects linked directly to the causal factors associated with the most severe crashes on the County roadway system. The CRSP serve as a tool for local safety advocates focus on activities, programs, and initiatives that will impact the traffic safety issues relevant to the community (Mn/DOT-SALT, 2011)

<sup>40</sup> Governor’s Initiative Projects Mn/DOT funded low-cost safety improvement installations on the state roadway system. Funds were made available in 2009 with installations to be completed by September 2011.

<sup>41</sup> Gap Projects are Mn/DOT funded low-cost safety improvement installations on the state roadway system. Funds were made available in 2009 with installations to be completed by September 2011.

| TZD Partnership Goal | Objective | 2011 Efforts   |
|----------------------|-----------|--|
|                      |           | <ul style="list-style-type: none"> <li>17 Designated Trauma Centers in South Central Minnesota (Center for Transportation Studies, University of Minnesota, 2012).<sup>43</sup></li> </ul> |

---

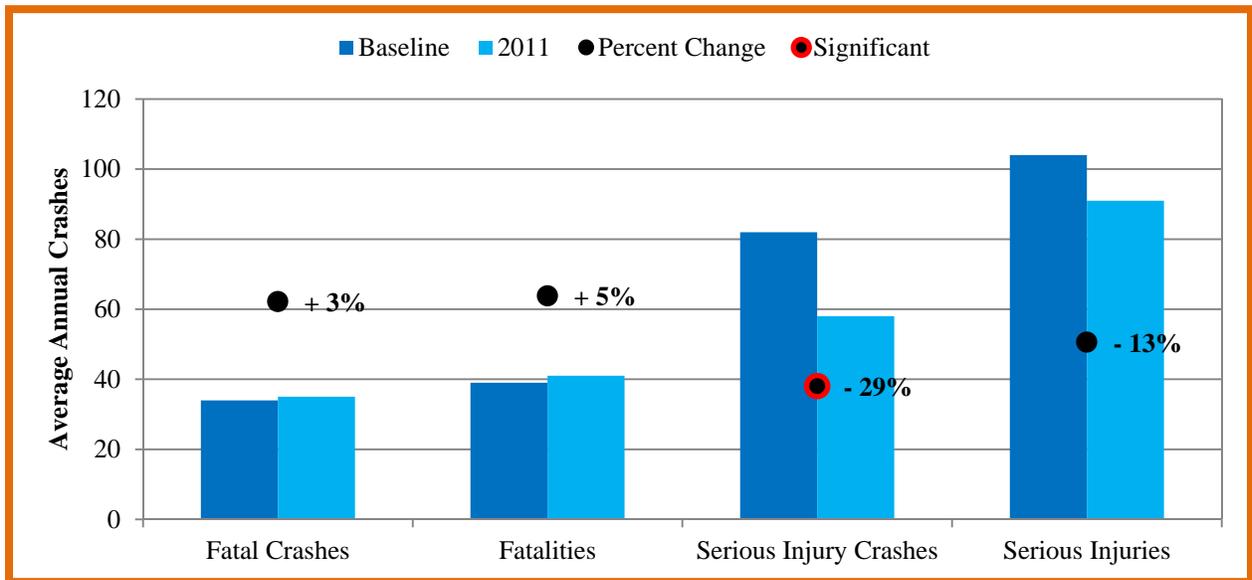
<sup>42</sup> Parent Education developed by DPS-OTS.

<sup>43</sup> As of August 2005, Minnesota has its own comprehensive statewide trauma system. The goal of the trauma system is to decrease time between injury and definitive care by ensuring that patients' medical needs are appropriately matched with hospitals' resources (Minnesota Department of Health, 2011).

## SOUTH CENTRAL TZD REGION STATISTICAL COMPARISONS

Through the hard work and dedication of all TZD stakeholders, the South Central TZD Region has demonstrated growth and success in promoting safer roadways. [Graph 6](#) shows that roadway fatalities, fatal crashes increased slightly. Serious injuries, and serious injury crashes were reduced, and the change in serious injury crashes was statistically significantly at  $p \leq .10$ , which means there is a low probability that the changes were due to random fluctuations.

**GRAPH 6: SOUTH CENTRAL REGION FATAL AND SERIOUS INJURY CRASHES/FATALITIES AND SERIOUS INJURIES**



Source: TIS Crash Data Exported 3/20/2012, Mn/DOT (crash level data); 4/13/2012, Mn/DOT (person level).

The top three contributing factors of fatal and serious injury crashes are impairment, speeding, and distraction. Additionally, unbelted drivers continue to be at high risk of death or serious injury. Compared to the baseline period, in 2011:

- ❖ Observed seatbelt usage was at 73.2% fatal crashes and serious injuries were down! There was a statistically significant reduction in unbelted fatalities and serious injuries.
- ❖ Impaired driver fatal crashes trended downward. Impairment-related serious injury crashes and serious injuries showed a statistically significant reduction.
- ❖ There were two enhanced enforcement in the South Central Region. Out of thirteen counties, there were enforcement grants in nine and HEAT zones in three. In 2011, there was a statistically significant reduction of speed-related fatalities!
- ❖ There was one distracted driver enforcement wave and statistically significant reductions of distracted driver-related serious injury crashes and fatalities.

**TABLE 3: SOUTH CENTRAL REGION COMPARISON OF BASELINE TO 2011**

| TZD Regional Objective              | Direction of Change | Standard Deviation (SD) | t statistic (df=12) | probability (p) <sup>44</sup> |
|-------------------------------------|---------------------|-------------------------|---------------------|-------------------------------|
| <b>Overall</b>                      |                     |                         |                     |                               |
| Fatal Crashes                       | Increased           | 0.0762                  | -0.668              | 0.517                         |
| Serious Injury Crashes              | <b>Decreased</b>    | 0.0397                  | -3.267              | 0.007*                        |
| Fatalities                          | Increased           | 0.0845                  | -0.690              | 0.503                         |
| Serious Injuries                    | Decreased           | 0.0462                  | -1.158              | 0.269                         |
| <b>Unbelted</b>                     |                     |                         |                     |                               |
| Fatal Crashes <sup>a</sup>          | Increased           | 0.0780                  | -0.427              | 0.677                         |
| Serious Injury Crashes <sup>a</sup> | <b>Decreased</b>    | 0.0631                  | -2.323              | 0.039*                        |
| Fatalities                          | <b>Decreased</b>    | 0.0584                  | -1.930              | 0.078*                        |
| Serious Injuries                    | Decreased           | 0.0870                  | -0.483              | 0.638                         |
| <b>Impairment-related</b>           |                     |                         |                     |                               |
| Fatal Crashes                       | Decreased           | 0.0434                  | -1.491              | 0.162                         |
| Serious Injury Crashes              | <b>Decreased</b>    | 0.0642                  | -1.938              | 0.077*                        |
| Fatalities                          | No Change           | 0.0498                  | -1.239              | 0.239                         |
| Serious Injuries                    | <b>Decreased</b>    | 0.0636                  | -1.917              | 0.079*                        |
| <b>Speed-related</b>                |                     |                         |                     |                               |
| Fatal Crashes                       | <b>Decreased</b>    | 0.0415                  | -2.449              | 0.031*                        |
| Serious Injury Crashes              | Decreased           | 0.0629                  | -1.065              | 0.308                         |
| Fatalities                          | Increased           | 0.0919                  | -0.679              | 0.510                         |
| Serious Injuries                    | Decreased           | 0.0853                  | -1.758              | 0.104                         |
| <b>Distraction-related</b>          |                     |                         |                     |                               |
| Fatal Crashes                       | Decreased           | 0.0471                  | -1.477              | 0.165                         |
| Serious Injury Crashes              | <b>Decreased</b>    | 0.0616                  | -2.860              | 0.014*                        |
| Fatalities                          | <b>Decreased</b>    | 0.0415                  | -1.855              | 0.088*                        |
| Serious Injuries                    | Decreased           | 0.0931                  | -0.842              | 0.416                         |

Source: TIS Crash Data Exported 3/20/2012, Mn/DOT (crash level data); 4/13/2012, Mn/DOT (person level).

Notes: <sup>a</sup> Unbelted Crash Reductions are not part of the *Regional Strategic Plan*, but are presented here for continuity. <sup>b</sup> Paired Sample t-test was used to compare baseline (2006-2010) crash record data to 2011 crash record data. \*Denotes changes were statistically significant at  $p \leq .10$  or 90% confidence interval.

### BENEFITS AND PERSISTENT CHALLENGES

Although regional partners actively promoted the TZD mission before the regional initiative, the South Central TZD Region was officially established in 2010. The cumulative effect of the South Central TZD Regional Coordinator’s, regional partners’ and stakeholders’ efforts showed promising impact on most areas of traffic safety.

**Key Finding:** South Central TZD Region is a younger region that has met fourteen of eighteen objectives in its *Strategic Plan*. Even greater traffic safety gains are anticipated with continued regional efforts and growth.

<sup>44</sup> See “How to Read This Report, Methods” for explanation of columns.

Both excessive or illegal speed and improper seatbelt usage appear to be serious and persistent challenges in the South Central TZD Region.

# NORTHWESTERN MINNESOTA TZD REGION

---

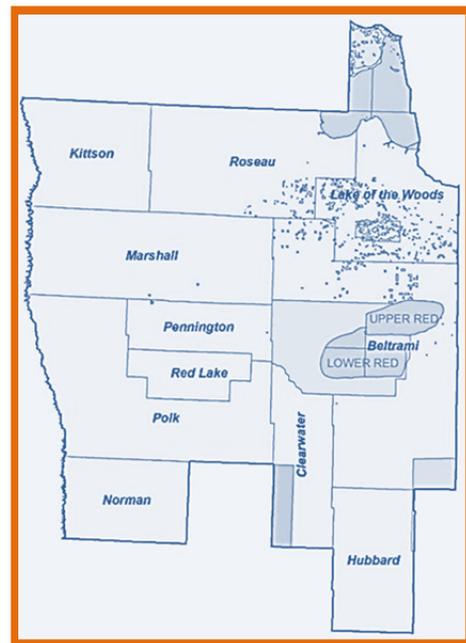
Traffic safety advocates in the eleven counties of Northwestern Minnesota have an extensive history of promoting traffic safety. In a 2008 workshop, these stakeholders partnered to create programs for reducing traffic fatalities and serious injuries. By 2010, a regional coordinator was employed to further develop partnerships in Education, Engineering, Enforcement, and Emergency medical and trauma service organizations.

A regional strategic plan was developed in order to identify goals and strategies to accomplish the mission in Northwestern Minnesota. Northwestern Minnesota TZD Regional Strategic Plan was informed by regional crash data and best practices.

In 2010, there were 411 deaths on Minnesota roadways, 23 of these deaths occurred on Northwestern Minnesota roadways. Regional analysis concluded that the leading causes of traffic-related fatalities and severe injuries were improper seatbelt use, impaired driver, illegal or unsafe speed, and inattentive driving. Leading crash types for fatal or serious injury crashes involved run-off-roads and intersections.

The Northwestern Minnesota TZD initiative aims to create a collaborative, comprehensive approach to reduce deaths and severe injuries. Beginning in June 2011, the region has promoted the TZD Mission by sponsoring an annual workshop to encourage traffic safety as a priority for policymakers. These workshops are a forum for law enforcement, engineers, educators, emergency medical technicians, policymakers, businesses, and other traffic safety advocates to understand traffic safety issues in the area, strengthen their commitment, and provide opportunities for community involvement.

Beyond regional workshops, the strategic plan calls for increased community awareness of TZD, requiring preparation of relevant local resources and regular update or enhancement of the TZD website. Steering Committee presentations and other networking events foster local partnerships in the TZD mission. Collaboration through the Northwestern Minnesota TZD Region provides opportunities for mutual benefit and efficiency in employing resources.



## NORTHWESTERN MINNESOTA TZD REGIONAL EVALUATION GRID

| TZD Partnership Goal  | Objective   | Baseline 2006-2010 Average                          | 2011  | Progress  |
|---|---|---|---|---|
| 1. To continuously decrease traffic-related fatalities and serious injuries in Northwestern Minnesota | 1a. Continuously increase regional seatbelt use rates   | N/A   | May 2011, the seat belt compliance rate in Northwestern Minnesota was 65.8% | N/A   |
|   | 1b. To examine the characteristics of the unbelted fatalities and serious injuries            | 5 unbelted persons fatally injured.                 | 8 unbelted persons fatally injured.   | 60% <b>increase</b> of unbelted fatalities.                             |
|   |   | 10 unbelted persons seriously injured.              | 9 unbelted persons seriously injured.                                       | 10% <b>reduction</b> of seriously injured.                              |
|   | 1c. Continuously reduce the fatal and serious injury crashes                                  | 22 fatal crashes.                                   | 24 fatal crashes.   | 9% <b>increase</b> of fatal crashes.                                    |
|   |   | 39 serious injury crashes.                          | 38 serious injury crashes.  | 3% <b>reduction</b> of serious injury crashes.                          |
|   | 1d. Continuously reduce the number of traffic fatalities and serious injuries                 | 24 persons fatally injured.                         | 26 persons fatally injured.   | 8% <b>increase</b> of traffic-related fatalities.                       |
|   |   | 49 persons seriously injured.                       | 53 persons seriously injured.   | 8% <b>increase</b> of traffic-related serious injuries.                 |
|   | 1e. Continuously reduce alcohol fatal and serious injury crashes                              | 8 impairment-related fatal crashes.                 | 10 impairment-related fatal crashes.  | 25% <b>increase</b> of impairment-related fatal crashes.                |
|   |   | 13 impairment-related serious injury crashes.       | 11 impairment-related serious injury crashes.                               | 15% <b>reduction</b> of impairment-related serious injury crashes.      |
|   | 1f. Continuously reduce the number of alcohol-related traffic fatalities and serious injuries | 9 fatalities in impairment-related crashes.         | 10 fatalities in impairment-related crashes.                                | 11% <b>increase</b> of fatalities in impairment-related crashes.        |
|   |   | 16 seriously injured in impairment-related crashes. | 18 seriously injured in impairment-related crashes.                         | 13% <b>increase</b> of seriously injured in impairment-related crashes. |

| TZD Partnership Goal | Objective   | Baseline  | 2011   | Progress   |
|----------------------|---|---|--|--|
|                      |   | 2006-2010 Average                                   |  |  |
|                      | 1g. Continuously reduce speed fatal and serious injury crashes                                    | 4 speed-related fatal crashes.                      | 7 speed-related fatal crashes.                       | 75% <b>increase</b> of speed-related-fatal crashes.                      |
|                      |   | 7 speed-related serious injury crashes.             | 6 speed-related serious injury crashes.              | 14% <b>reduction</b> of speed-related serious injury crashes.            |
|                      | 1h. Continuously reduce the number of speed-related traffic fatalities and serious injuries       | 12 fatalities in speed-related crashes.             | 14 fatalities in speed-related crashes.              | 17% <b>increase</b> of fatalities in speed-related crashes.              |
|                      |   | 22 seriously injured in speed-related crashes.      | 24 seriously injured in speed-related crashes.       | 9% <b>increase</b> of seriously injured in speed-related crashes.        |
|                      | 1i. Continuously reduce distraction-related fatal and serious injury crashes                      | 4 distraction-related fatal crashes.                | 2 distraction-related fatal crashes.                 | 50% <b>reduction</b> of distraction-related fatal crashes.               |
|                      |   | 7 distraction-related serious injury crashes.       | 8 distraction-related serious injury crashes.        | 14% <b>increase</b> of distraction-related serious injury crashes.       |
|                      | 1j. Continuously reduce the number of distraction-related traffic fatalities and serious injuries | 4 fatalities in distraction-related crashes.        | 2 fatalities in distraction-related crashes.         | 50% <b>reduction</b> of fatalities in distraction-related crashes.       |
|                      |   | 8 seriously injured in distraction-related crashes. | 12 seriously injured in distraction-related crashes. | 50% <b>increase</b> of seriously injured in distraction-related crashes. |

Source: TIS Crash Data Exported 3/20/2012, Mn/DOT (crash level data); 4/13/2012, Mn/DOT (person level).

## NORTHWESTERN MINNESOTA TZD REGION PARTNERSHIP ACTIVITIES

| TZD Partnership Goal  | Objective  | 2011 Efforts   |
|---|--|--|
| 2. To continuously increase TZD awareness and partnerships across Northwestern Minnesota for both the general public and traffic safety professionals | 2a. Establish the vision of TZD as a priority for all region, county, city government agencies | <ul style="list-style-type: none"> <li>• 11 presentations to Mn/DOT and stakeholder groups (Kostzrewski, 2011).</li> <li>• Invitations to all mayors and county commissioners to workshops, Steering Committee meetings (Kostzrewski, 2011).</li> <li>• 4 presentations to county commissioners (Kostzrewski, 2011).</li> <li>• 9 Designated Trauma Centers in Northwestern Region (Center for Transportation Studies, 2010)</li> </ul>  |
|   | 2b. Create and strengthen partnerships in the region   | <ul style="list-style-type: none"> <li>• 1 regional workshop (32 participants) (Kostzrewski, 2011).</li> <li>• 1 Steering Committee meeting (15 attendees) (Kostzrewski, 2011).</li> </ul>   |
|   | 2c. Promote & implement effective traffic safety initiatives in the region                     | <ul style="list-style-type: none"> <li>• Established 119 traffic safety partners (Kostzrewski, 2011).</li> <li>• 28 Stakeholders attended the state TZD Conference (Kirk, 2012).</li> <li>• 1 of 11 Counties had a TZD Safe Roads Grant in 2011 (Pehrson, 2012).<sup>45</sup></li> <li>• Developed/distributed one-pager, strategic plan, and PowerPoint presentations (Kostzrewski, 2011).</li> <li>• Presentation to UPS, Thief River Falls on distracted driving (Kostzrewski, 2011).</li> <li>• Presentation to elementary school in Thief River Falls on seatbelts (Kostzrewski, 2011).</li> <li>• Assisted media campaigns in Fargo/Moorhead area (Kostzrewski, 2011).</li> <li>• 20.6% of residents in Northwestern Minnesota Region report being aware of TZD (Accora Research, Inc., 2011).<sup>46</sup></li> </ul> |

<sup>45</sup> TZD Safe Roads Program, formerly known as Safe Communities Programs, is coalitions of agencies and organizations that aim to address traffic safety issues (TZD Safe Roads Program, 2012).

<sup>46</sup> TZD Awareness is disaggregated from the Annual Mn/DOT Omnibus Survey (Accora Research, Inc., 2011).

| TZD Partnership Goal | Objective | 2011 Efforts  |
|----------------------|-----------|---|
|                      |           | <ul style="list-style-type: none"> <li>• 2 counties participated in the HEAT Program 2009-2012 (Fleming, 2012).<sup>47</sup></li> <li>• 5 of 11 Counties had a TZD Enforcement Grant in 2011 (Swanson, 2012).<sup>48</sup></li> <li>• 5 enhanced enforcement provided in 5 counties in 2011 (Berger, 2012).<sup>49</sup></li> <li>• One county was awarded an OTS Challenge Grant (Swanson, 2012).<sup>50</sup></li> <li>• Law Enforcement Liaison for Northwestern Minnesota attended 23 coalition meetings (Kummrow, 2012).</li> <li>• Law Enforcement Liaison for Northwestern Minnesota attended the Northwestern Minnesota TZD Region workshop (Kummrow, 2012).</li> <li>• Law Enforcement Liaison for Northwestern Minnesota attended 2 tribal meetings (Kummrow, 2012).</li> <li>• Law Enforcement Liaison for Northwestern Minnesota provided 10 council/board presentations (Kummrow, 2012).<sup>51</sup></li> </ul> |
|                      |           | <ul style="list-style-type: none"> <li>• 11 of 11 County Road Safety Plans planned completion, 2012 (Leuer, 2012).<sup>52</sup></li> <li>• 1 Governor’s Initiative Project funded and installed (Fleming, 2012).<sup>53</sup></li> <li>• 2 Gap Projects funded and installed (Fleming, 2012).<sup>54</sup></li> </ul>   |
|                      |           | <ul style="list-style-type: none"> <li>• 2 driver education schools surveyed interested in developing parent component (Pehrson, 2012).<sup>55</sup></li> </ul>   |

<sup>47</sup> HEAT is a multi-year, enforcement and education campaign against aggressive traffic. This program is in partnership with Mn/DOT, MN DPS-OTS, MSP, and local law enforcement agencies (Mn/DOT-OTST, 2009).

<sup>48</sup> TZD Enforcement Grants are DPS-OTS funded enforcement and education projects which include projects formerly known as Night-Cap and Safe and Sober. Funds are available to local law enforcement agencies.

<sup>49</sup> Enforcement Waves include heightened enforcement and education funded through a TZD Enforcement Grant. See [Safe & Sober Enforcement Calendar](#) for more details.

<sup>50</sup> TZD Challenge Grant is a DPS-OTS funded grant for local law enforcement agencies for safety related equipment and addition traffic enforcement.

<sup>51</sup> “Law enforcement liaisons (LELs) are a resource to local agencies regarding traffic enforcement programs and information. They are available to assist with informing governing bodies of the importance of traffic safety, motivating officers and contacting the media” (Department of Public Safety, 2012).

<sup>52</sup> County Road Safety Plans are data driven tools developed through Mn/DOT. They may be used to identify a specific set of low cost systematic safety projects linked directly to the causal factors associated with the most severe crashes on the County roadway system. The CRSP serve as a tool for local safety advocates focus on activities, programs, and initiatives that will impact the traffic safety issues relevant to the community (Mn/DOT-SALT, 2011)

<sup>53</sup> Governor’s Initiative Projects Mn/DOT funded low-cost safety improvement installations on the state roadway system. Funds were made available in 2009 with installations to be completed by September 2011.

<sup>54</sup> Gap Projects are Mn/DOT funded low-cost safety improvement installations on the state roadway system. Funds were made available in 2009 with installations to be completed by September 2011.

<sup>55</sup> Parent Education developed by DPS-OTS.

| TZD Partnership Goal | Objective | 2011 Efforts   |
|----------------------|-----------|--|
|                      |           | <ul style="list-style-type: none"> <li>8 Designated Trauma Centers in Northwestern Minnesota (Center for Transportation Studies, University of Minnesota, 2012).<sup>56</sup></li> </ul> |

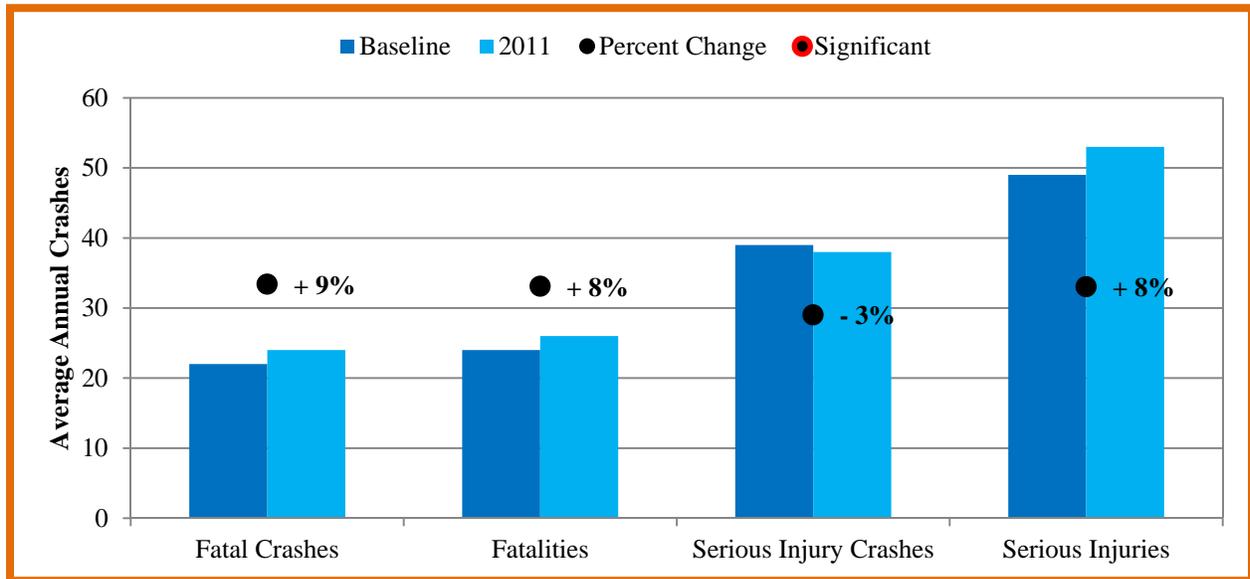
---

<sup>56</sup> As of August 2005, Minnesota has its own comprehensive statewide trauma system. The goal of the trauma system is to decrease time between injury and definitive care by ensuring that patients' medical needs are appropriately matched with hospitals' resources (Minnesota Department of Health, 2011).

## NORTHWESTERN MINNESOTA TZD REGION STATISTICAL COMPARISONS

Through the hard work and dedication of all TZD stakeholders, the Northwestern Minnesota TZD Region has demonstrated growth and success in promoting safer roadways. [Graph 7](#) shows that roadway fatalities, fatal crashes, and serious injuries increased slightly; however, serious injury crashes were reduced slightly. These small changes are not statistically significant, which means they may be due to random fluctuations.

**GRAPH 7: NORTHWESTERN MINNESOTA REGION FATAL AND SERIOUS INJURY CRASHES/FATALITIES AND SERIOUS INJURIES**



Source: TIS Crash Data Exported 3/20/2012, Mn/DOT (crash level data); 4/13/2012, Mn/DOT (person level).

The top three contributing factors of fatal and serious injury crashes are impairment, speeding, and distraction. Additionally, unbelted drivers continue to be at high risk of death or serious injury. Compared to the baseline period, in 2011:

- ❖ Observed seatbelt usage was at 65.8%. Unbelted fatal crashes and fatalities increased slightly. There was no statistically significant change in unbelted serious injury crashes.
- ❖ There were no statistically significant changes in impaired driver-related crashes. Impaired driver fatal crashes, fatalities, and serious injuries increased slightly. Impairment-related serious injury crashes and serious injury crashes decreased slightly.
- ❖ Out of eleven counties, there were enforcement grants in five and HEAT zones in two. In 2011, there were no statistically significant changes in serious speed-related crashes. Speed-related fatal crashes, fatalities, and serious injuries increased slightly, and serious injury crashes decreased slightly.

- ❖ There were no statistically significant changes in distracted driver-related serious crashes. Distracted driver-related fatal crashes and fatalities decreased slightly, and serious injury crashes and serious injury crashes increased slightly.

**TABLE 4: NORTHWESTERN MINNESOTA REGION COMPARISON OF BASELINE TO 2011**

| TZD Regional Objective              | Direction of Change | Standard Deviation (SD) | t statistic (df=10) <sup>b</sup> | probability (p) <sup>57</sup> |
|-------------------------------------|---------------------|-------------------------|----------------------------------|-------------------------------|
| <b>Overall</b>                      |                     |                         |                                  |                               |
| Fatal Crashes                       | Decrease            | 0.0650                  | -0.156                           | 0.879                         |
| Serious Injury Crashes              | Decrease            | 0.0773                  | -0.691                           | 0.505                         |
| Fatalities                          | Decrease            | 0.0683                  | -0.020                           | 0.985                         |
| Serious Injuries                    | Decrease            | 0.0776                  | -0.279                           | 0.786                         |
| <b>Unbelted</b>                     |                     |                         |                                  |                               |
| Fatal Crashes <sup>a</sup>          | Increase            | 0.0467                  | +0.127                           | 0.902                         |
| Serious Injury Crashes <sup>a</sup> | Decrease            | 0.0714                  | -0.925                           | 0.377                         |
| Fatalities                          | Increase            | 0.0655                  | +0.849                           | 0.416                         |
| Serious Injuries                    | Decrease            | 0.0660                  | -0.516                           | 0.617                         |
| <b>Impairment-related</b>           |                     |                         |                                  |                               |
| Fatal Crashes                       | Increase            | 0.0639                  | +0.622                           | 0.548                         |
| Serious Injury Crashes              | Decrease            | 0.0635                  | -0.786                           | 0.450                         |
| Fatalities                          | Increase            | 0.0628                  | +0.566                           | 0.584                         |
| Serious Injuries                    | Decrease            | 0.0609                  | -0.203                           | 0.844                         |
| <b>Speed-related</b>                |                     |                         |                                  |                               |
| Fatal Crashes                       | Increase            | 0.0599                  | +0.820                           | 0.431                         |
| Serious Injury Crashes              | Decrease            | 0.0447                  | -0.939                           | 0.370                         |
| Fatalities                          | Increase            | 0.0556                  | +0.199                           | 0.846                         |
| Serious Injuries                    | Decrease            | 0.0839                  | -0.727                           | 0.484                         |
| <b>Distraction-related</b>          |                     |                         |                                  |                               |
| Fatal Crashes                       | Decrease            | 0.0447                  | -1.388                           | 0.195                         |
| Serious Injury Crashes              | Increase            | 0.0474                  | +0.491                           | 0.634                         |
| Fatalities                          | Decrease            | 0.0447                  | -1.388                           | 0.195                         |
| Serious Injuries                    | Increase            | 0.0644                  | +0.862                           | 0.409                         |

Source: TIS Crash Data Exported 3/20/2012, Mn/DOT (crash level data); 4/13/2012, Mn/DOT (person level).

Notes: <sup>a</sup> Unbelted Crash Reductions are not part of the *Regional Strategic Plan*, but are presented here for continuity. <sup>b</sup> Paired Sample t-test was used to compare baseline (2006-2010) crash record data to 2011 crash record data. \*Denotes changes were statistically significant at  $p \leq .10$  or 90% confidence interval.

## BENEFITS AND PERSISTENT CHALLENGES

The Northwestern Minnesota TZD Region was loosely established in 2008; however, a regional coordinator was not hired until 2010.

<sup>57</sup> See “How to Read This Report, Methods” for explanation of columns.

**Key Finding:** Northwestern Minnesota TZD Region has reached eleven out of eighteen objectives within its *Strategic Plan*. Even greater traffic safety gains are anticipated with continued regional efforts and growth.

While the traffic safety challenges are salient, the trends are pointing toward desirable direction in 11 out of 18 objectives; these differences are not statistically significant. According to seatbelt usage rates and crash data, improper or no seatbelt usage appears to be a serious and persistent challenge in Northwestern Minnesota. As the Northwestern Minnesota TZD Region matures and becomes part of the natural regional discourse, benefits similar to established regions are anticipated!

# NORTHEASTERN MINNESOTA TZD REGION

---

Traffic safety advocates in the eight counties of Northeastern Minnesota have an extensive history of promoting traffic safety. By 2010, a coalition was formed whose goal was to reduce traffic fatalities and serious injuries and promote the TZD Mission. That same year, a regional coordinator was employed to further develop partnerships in Education, Engineering, Enforcement, and Emergency medical and trauma service organizations.

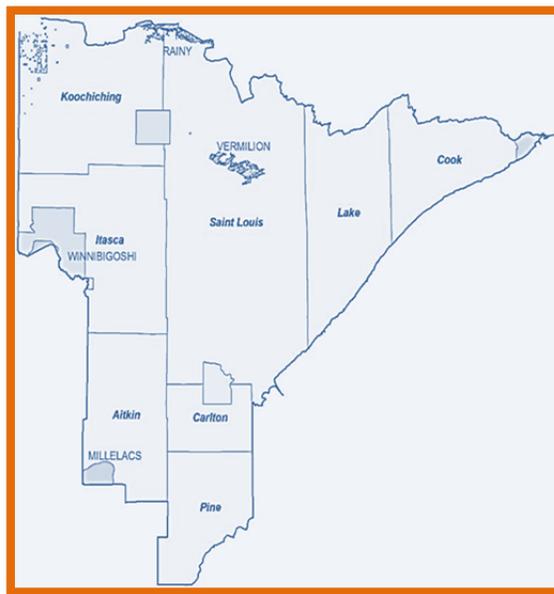
A regional strategic plan was developed in order to identify goals and strategies to accomplish the mission in these key areas. Northeastern Minnesota

TZD Regional Strategic Plan was informed by regional crash data and best practices.

In 2010, there were 411 deaths on Minnesota roadways, 36 of these deaths occurred on Northeastern Minnesota roadways. Regional analysis concluded that the leading causes of traffic-related fatalities and severe injuries were improper seatbelt use, and impaired, aggressive, and inattentive driving. Leading crash types for fatal or serious injury crashes involved run-off-roads and intersections. The regional strategic plan highlights these emphasis areas in reducing fatalities and serious injuries.

The Northeastern Minnesota TZD initiative aims to create a collaborative, comprehensive approach to reducing deaths and severe injuries. Beginning in June 2011, the Northeastern Minnesota TZD Region sponsored an annual workshop to promote traffic safety as a priority for policymakers. These workshops are a forum for law enforcement, engineers, educators, emergency medical technicians, policymakers, businesses, and other traffic safety advocates to understand traffic safety issues in the area, strengthen their commitment, and provide opportunities for community involvement.

Beyond regional workshops, the strategic plan calls for increased community awareness of TZD, requiring preparation of relevant local resources and regular update or enhancement of the TZD website. Steering Committee presentations and other networking events foster local partnerships in the TZD mission. Collaboration through the Northeastern Minnesota TZD Region provides opportunities for mutual benefit and efficiency in employing resources.



## NORTHEASTERN MINNESOTA TZD REGIONAL EVALUATION GRID

| TZD Partnership Goal  | Objective   | Baseline 2006-2010 Average                          | 2011  | Progress   |
|---|---|---|---|--|
| 1. To continuously decrease traffic-related fatalities and serious injuries in Northeastern Minnesota | 1a. Continuously increase regional seatbelt use rates   | N/A   | May 2011, the seat belt compliance rate in Northeastern Minnesota was 80.3% | N/A  |
|   | 1b. To examine the characteristics of the unbelted fatalities and serious injuries            | 11 unbelted persons fatally injured.                | 9 unbelted persons fatally injured.   | 18% <b>reduction</b> of unbelted fatalities.                           |
|   |   | 28 unbelted persons seriously injured.              | 24 unbelted persons seriously injured.                                      | 14% <b>reduction</b> of unbelted serious injuries.                     |
|   | 1c. Continuously reduce the fatal and serious injury crashes                                  | 42 fatal crashes.                                   | 36 fatal crashes.   | 14% <b>reduction</b> of fatal crashes.                                 |
|   |   | 95 serious injury crashes                           | 88 serious injury crashes   | 7% <b>reduction</b> of serious injury crashes.                         |
|   | 1d. Continuously reduce the number of traffic fatalities and serious injuries                 | 44 persons fatally injured.                         | 39 persons fatally injured.   | 11% <b>reduction</b> of traffic-related fatalities.                    |
|   |   | 124 persons seriously injured.                      | 109 persons seriously injured.  | 12% <b>reduction</b> of traffic-related serious injuries.              |
|   | 1e. Continuously reduce alcohol fatal and serious injury crashes                              | 13 impairment-related fatal crashes.                | 7 impairment-related fatal crashes.   | 46% <b>reduction</b> of impairment-related fatal crashes.              |
|   |   | 29 impairment-related serious injury crashes.       | 26 impairment-related serious injury crashes.                               | 10% <b>reduction</b> of impairment-related serious injury crashes.     |
|   | 1f. Continuously reduce the number of alcohol-related traffic fatalities and serious injuries | 14 fatalities in impairment-related crashes.        | 7 fatalities in impairment-related crashes.                                 | 50% <b>reduction</b> of fatalities in impairment-related crashes.      |
|   |   | 36 seriously injured in impairment-related crashes. | 38 seriously injured in impairment-related crashes.                         | 6% <b>increase</b> of seriously injured in impairment-related crashes. |
|   | 1g. Continuously reduce speed fatal and serious injury crashes                                | 11 speed-related fatal crashes.                     | 8 speed-related fatal crashes.  | 27% <b>reduction</b> of speed-related fatal crashes.                   |
|   |   | 20 speed-related serious injury crashes.            | 17 speed-related serious injury crashes.                                    | 15% <b>reduction</b> of speed-related serious injury crashes.          |

| TZD Partnership Goal | Objective   | Baseline<br>2006-2010 Average                        | 2011   | Progress   |
|----------------------|---|--|--|--|
|                      | 1h. Continuously reduce the number of speed-related traffic fatalities and serious injuries       | 20 fatalities in speed-related crashes.              | 10 fatalities in speed-related crashes.              | 50% <b>reduction</b> of fatalities in speed-related crashes.             |
|                      |   | 47 seriously injured in speed-related crashes.       | 19 seriously injured in speed-related crashes.       | 60% <b>reduction</b> of seriously injured in speed-related crashes.      |
|                      | 1i. Continuously reduce distraction-related fatal and serious injury crashes                      | 7 distraction-related fatal crashes.                 | 7 distraction-related fatal crashes.                 | <b>No change</b> of distraction-related fatal crashes.                   |
|                      |   | 17 distraction-related serious injury crashes.       | 18 distraction-related serious injury crashes.       | 6% <b>increase</b> of distraction-related serious injury crashes.        |
|                      | 1j. Continuously reduce the number of distraction-related traffic fatalities and serious injuries | 7 fatalities in distraction-related crashes.         | 7 fatalities in distraction-related crashes.         | <b>No change</b> of fatalities in distraction-related crashes.           |
|                      |   | 23 seriously injured in distraction-related crashes. | 21 seriously injured in distraction-related crashes. | 9% <b>reduction</b> of seriously injured in distraction-related crashes. |

Source: TIS Crash Data Exported 3/20/2012, Mn/DOT (crash level data); 4/13/2012, Mn/DOT (person level).

## NORTHEASTERN MINNESOTA TZD REGION PARTNERSHIP ACTIVITIES

| TZD Partnership Goal  | Objective  | 2011 Efforts  |
|---|--|---|
| 2. To continuously increase TZD awareness and partnerships across Northeastern Minnesota for both the general public and traffic safety professionals | 2a. Establish the vision of TZD as a priority for all region, county, city government agencies | <ul style="list-style-type: none"> <li>• Outreach efforts added 358 more partners: 26 from engineering, 197 from EMS, 37 from enforcement, and 79 from education (Kostrzewski, 2011).</li> <li>• Invitation to all mayors and county commissioners to TZD workshop (Kostrzewski, 2011).</li> <li>• 14 Designated Trauma Centers in Northeastern Minnesota (Center for Transportation Studies, 2010).</li> </ul>   |
|   | 2b. Create and strengthen partnerships in the region   | <ul style="list-style-type: none"> <li>• Coordinator served on Northeastern Minnesota Regional Trauma Advisory Committee (Kostrzewski, 2011).</li> <li>• Networking relationships with DWI Court Team, Mesabi Range Safe Community, and Driving 4 Safe Communities (Kostrzewski, 2011).</li> <li>• 35 participants at Steering Committee meeting (Kostrzewski, 2011).</li> <li>• 1 Regional Workshop: 72 participants (Kostrzewski, 2011).</li> <li>• 22 presentations to Mn/DOT and stakeholder groups.</li> </ul> |
|   |  | <ul style="list-style-type: none"> <li>• 98 Stakeholders attended the state TZD Conference (Kirk, 2012).</li> <li>• Quarterly steering committee meetings planned using multiple e-meeting venues to increase participation in this geographically vast region (Kostrzewski, 2011).</li> </ul>  |

| TZD Partnership Goal | Objective  | 2011 Efforts   |
|----------------------|--|--|
|                      | 2c. Promote & implement effective traffic safety initiatives in the region | <ul style="list-style-type: none"> <li>• 2 of 8 Counties had a TZD Safe Roads Grant in 2011 (Pehrson, 2012).<sup>58</sup></li> <li>• Shared information with employers through NETS (Kons, 2011).<sup>59</sup></li> <li>• 4 newspaper covering traffic safety and regional TZD efforts (Kostrzewski, 2011).</li> <li>• 2 media events for enforcement campaigns (Kostrzewski, 2011).</li> <li>• Pilot Enforcement Project media event with South St Louis County law enforcement (Kostrzewski, 2011).</li> <li>• Media event at UMD for distracted driving with coalition of law enforcement agencies</li> <li>• Gathered baseline seatbelt use (Kostrzewski, 2011).</li> <li>• 23.0% of residents in Northwestern Minnesota Region report being aware of TZD (Accora Research, Inc., 2011).<sup>60</sup></li> </ul> |
|                      |  | <ul style="list-style-type: none"> <li>• 4 of 8 counties participated in the HEAT Program 2009-2012 (Fleming, 2012).<sup>61</sup></li> <li>• 5 of 8 Counties had a TZD Enforcement Grant in 2011 (Swanson, 2012).<sup>62</sup></li> <li>• 5 enhanced enforcement provided in 5 counties in 2011 (Berger, 2012).<sup>63</sup></li> <li>• Law Enforcement Liaison for Minnesota attended 15 coalition meetings (Scherf, 2012).</li> <li>• Law Enforcement Liaison attended 6 tribal meetings (Scherf, 2012).</li> <li>• Law Enforcement Liaison provided 10 council/board presentations (Scherf, 2012).<sup>64</sup></li> <li>• Law Enforcement Liaison attended 7 chief's meetings (Scherf, 2012).</li> </ul>   |

<sup>58</sup> County Road Safety Plans are data driven tools developed through Mn/DOT. They may be used to identify a specific set of low-cost systematic safety projects linked directly to the causal factors associated with the most severe crashes on the County roadway system. The CRSP serve as a tool for local safety advocates focus on activities, programs, and initiatives that will impact the traffic safety issues relevant to the community (Mn/DOT-SALT, 2011)

<sup>59</sup> The Minnesota Network of Employers for Traffic Safety (NETS) is part of a national non-profit organization that helps employers implement effective policies, workplace programs, and community activities, enhancing the quality of life in these organizations while significantly reducing their cost of doing business (Welcome to Minnesota NETS!).

<sup>60</sup> TZD Awareness is disaggregated from the Annual Mn/DOT Omnibus Survey (Accora Research, Inc., 2011).

<sup>61</sup> HEAT is a multi-year, enforcement and education campaign against aggressive traffic. This program is in partnership with Mn/DOT, MN DPS-OTS, MSP, and local law enforcement agencies (Mn/DOT-OTST, 2009).

<sup>62</sup> TZD Enforcement Grants are DPS-OTS funded enforcement and education projects which include projects formerly known as Night-Cap and Safe and Sober. Funds are available to local law enforcement agencies.

<sup>63</sup> Enforcement Waves include heightened enforcement and education funded through a TZD Enforcement Grant. See [Safe & Sober Enforcement Calendar](#) for more details.

<sup>64</sup> "Law enforcement liaisons (LELs) are a resource to local agencies regarding traffic enforcement programs and information. They are available to assist with informing governing bodies of the importance of traffic safety, motivating officers and contacting the media" (Department of Public Safety, 2012).

| TZD Partnership Goal | Objective | 2011 Efforts   |
|----------------------|-----------|--|
|                      |           | <ul style="list-style-type: none"> <li>• 8 of 8 County Road Safety Plans planned completion, 2012 (Leuer, 2012).</li> <li>• 1 Governor’s Initiative Project funded and installed (Fleming, 2012)<sup>65</sup></li> </ul> |
|                      |           | <ul style="list-style-type: none"> <li>• 2 drivers schools surveyed reported having a parent education component in their curriculum (Pehrson, 2012).<sup>66</sup></li> </ul>  |
|                      |           | <ul style="list-style-type: none"> <li>• 14 Designated Trauma Centers in Northeastern Minnesota (Center for Transportation Studies, University of Minnesota, 2012).<sup>67</sup></li> </ul>                              |

<sup>65</sup> Governor’s Initiative Projects Mn/DOT funded low-cost safety improvement installations on the state roadway system. Funds were made available in 2009 with installations to be completed by September 2011.

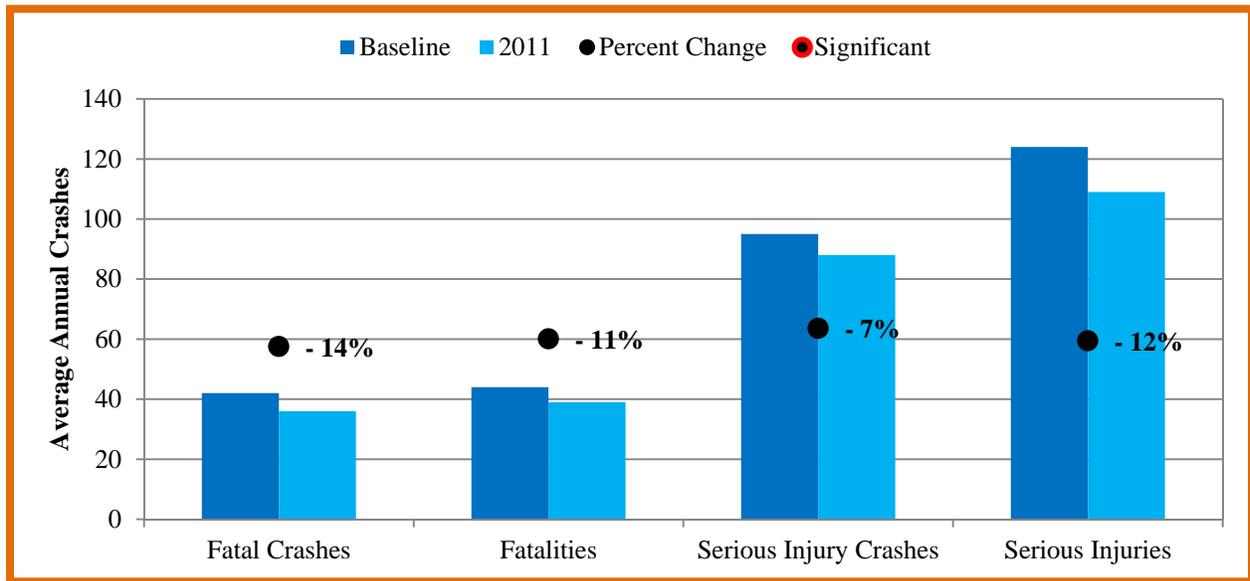
<sup>66</sup> Parent Education developed by DPS-OTS.

<sup>67</sup> As of August 2005, Minnesota has its own comprehensive statewide trauma system. The goal of the trauma system is to decrease time between injury and definitive care by ensuring that patients' medical needs are appropriately matched with hospitals' resources (Minnesota Department of Health, 2011).

## NORTHEASTERN MINNESOTA TZD REGION STATISTICAL COMPARISONS

Through the hard work and dedication of all TZD stakeholders, the Northeastern Minnesota TZD Region has demonstrated growth and success in promoting safer roadways. There were no statistically significant changes in serious crashes in the Northeastern Minnesota Region; however [Graph 8](#) shows that roadway fatalities, fatal crashes, serious injury crashes, and serious injuries decreased slightly. These small changes are not statistically significant, which means they may be due to random fluctuations, but are trending in the desirable direction.

**GRAPH 8: NORTHEASTERN MINNESOTA TZD REGION FATAL AND SERIOUS INJURY CRASHES/FATALITIES AND SERIOUS INJURIES**



Source: TIS Crash Data Exported 3/20/2012, Mn/DOT (crash level data); 4/13/2012, Mn/DOT (person level).

The top three contributing factors of fatal and serious injury crashes are impairment, speeding, and distraction. Additionally, unbelted drivers continue to be at high risk of death or serious injury.

Compared to the baseline period, in 2011:

- ❖ Observed seatbelt usage was at 80.3%. Unbelted fatal crashes and fatalities decreased slightly, but unbelted serious injuries were significantly reduced.
- ❖ There were no statistically significant changes in impaired driver-related crashes. Impaired driver fatal crashes, fatalities, and serious injury crashes decreased slightly. Impairment-related serious injury crashes increased slightly.
- ❖ There were two media events to support enforcement campaigns in the Northeastern Minnesota Region. Out of eight counties, there were enforcement grants in five counties and HEAT zones in four counties. In 2011, there was a statistically significant reduction of serious speed-related injuries. Speed-related fatal crashes, fatalities, and serious injury crashes decreased slightly.

- ❖ There were no statistically significant changes in distracted driver-related serious crashes. Distracted driver-related serious injuries decreased slightly while serious injury crashes increased slightly.

**TABLE 5: NORTHEASTERN MINNESOTA TZD REGION COMPARISON OF BASELINE TO 2011**

| TZD Regional Objective              | Direction of Change | Standard Deviation (SD) | t statistic (df=7) | probability (p) <sup>68</sup> |
|-------------------------------------|---------------------|-------------------------|--------------------|-------------------------------|
| <b>Overall</b>                      |                     |                         |                    |                               |
| Fatal Crashes                       | Decrease            | 0.0903                  | -0.283             | 0.785                         |
| Serious Injury Crashes              | Decrease            | 0.0681                  | -0.244             | 0.814                         |
| Fatalities                          | Decrease            | 0.0914                  | -0.242             | 0.816                         |
| Serious Injuries                    | Decrease            | 0.0938                  | -0.516             | 0.622                         |
| <b>Unbelted</b>                     |                     |                         |                    |                               |
| Fatal Crashes <sup>a</sup>          | Decrease            | 0.1145                  | -1.556             | 0.164                         |
| Serious Injury Crashes <sup>a</sup> | <b>Decrease</b>     | 0.0522                  | -4.913             | 0.002*                        |
| Fatalities                          | Decrease            | 0.1082                  | -0.666             | 0.527                         |
| Serious Injuries                    | Decrease            | 0.0814                  | -1.500             | 0.177                         |
| <b>Impairment-related</b>           |                     |                         |                    |                               |
| Fatal Crashes                       | Decrease            | 0.0996                  | -0.996             | 0.352                         |
| Serious Injury Crashes              | Decrease            | 0.0461                  | -1.625             | 0.148                         |
| Fatalities                          | Decrease            | 0.0992                  | -1.261             | 0.248                         |
| Serious Injuries                    | Increase            | 0.0738                  | -0.588             | 0.575                         |
| <b>Speed-related</b>                |                     |                         |                    |                               |
| Fatal Crashes                       | Decrease            | 0.0964                  | -0.828             | 0.435                         |
| Serious Injury Crashes              | Decrease            | 0.0732                  | -1.100             | 0.308                         |
| Fatalities                          | Decrease            | 0.1191                  | -1.566             | 0.161                         |
| Serious Injuries                    | <b>Decrease</b>     | 0.0702                  | -4.881             | 0.002*                        |
| <b>Distraction-related</b>          |                     |                         |                    |                               |
| Fatal Crashes                       | No Change           | 0.0391                  | +0.277             | 0.790                         |
| Serious Injury Crashes              | Increase            | 0.0439                  | +0.167             | 0.872                         |
| Fatalities                          | No Change           | 0.0391                  | +0.277             | 0.790                         |
| Serious Injuries                    | Decrease            | 0.0395                  | -1.544             | 0.167                         |

Source: TIS Crash Data Exported 3/20/2012, Mn/DOT (crash level data); 4/13/2012, Mn/DOT (person level).

Notes: <sup>a</sup> Unbelted Crash Reductions are not part of the *Regional Strategic Plan*, but are presented here for continuity. <sup>b</sup> Paired Sample t-test was used to compare baseline (2006-2010) crash record data to 2011 crash record data. \*Denotes changes were statistically significant at  $p \leq .10$  or 90% confidence interval.

<sup>68</sup> See “How to Read This Report, Methods” for explanation of columns.

## BENEFITS AND PERSISTENT CHALLENGES

The Northeastern Minnesota TZD Region officially began in 2010; however, several counties within the region had established *Safe Communities Coalitions* prior to 2010. The efforts of the TZD Regional Coordinator, regional strategic partners, and stakeholders afforded notable improvements in traffic safety. Out of 18 objectives within the *Regional Strategic Plan*, The Northeastern Minnesota TZD Region has met 14. Distracted driving and impaired driving appears to be a persistent issue within the region.

**Key Finding:** Northeastern Minnesota TZD Region has reached fourteen out of eighteen objectives within its *Strategic Plan*. Even greater traffic safety gains are anticipated with continued regional efforts and growth.

# SUMMARY

---

Roadway fatalities and serious injuries are no longer an acceptable cost of doing business. The implementation of TZD Regions and the employment of TZD Coordinators is an innovative practice that drives straight to the heart of the TZD Mission, “To create a culture for which traffic fatalities and serious injuries are no longer acceptable....” While these analyses focus on the outcomes through the established TZD Regions, it is important to remember that traffic safety advocates have promoted traffic safety long before the establishment of TZD Regions and TZD Minnesota. Uniting their efforts through a multi-disciplined initiative and working collaboratively toward a cohesive goal appears to have accelerated traffic safety gains in Minnesota.

**Key Finding:** Higher levels of county participation in traffic safety grants and Safety Plans is associated with positive traffic safety outcomes!

Due to limited data availability, it was not possible to clearly identify specific types of services and activities that garner the greatest impact on traffic safety. A Pearson’s bivariate correlation was conducted to identify and measure the relationship between the level of traffic safety participation and the change in traffic fatalities and serious injuries from baseline to 2011. The proportions of counties within a TZD Region with a Safe Roads Grant, TZD Enforcement Grants, and completed County Road Safety Plans were aggregated into an overall score, *traffic safety participation*, for each region. *Traffic safety participation* was negatively correlated with changes in traffic fatalities ( $r=-.748, n=5, p<0.146$ ) and serious injuries ( $r=-.879, n=5, p<0.050$ ). This means that greater levels of traffic safety participation at the county levels, through TZD enforcement and TZD Safe Roads Grants, and County Road Safety Plans, garnered greater reductions in traffic fatalities and serious injuries.

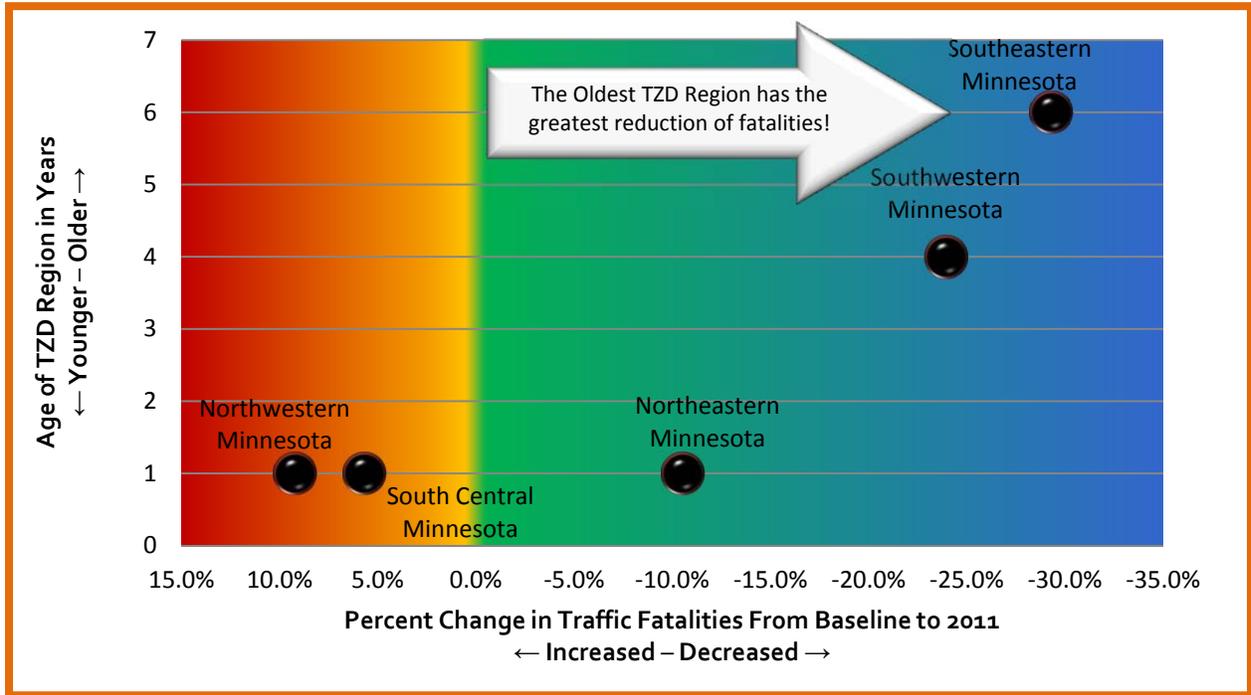
As each TZD Region grows and matures, traffic fatalities and serious injuries are reduced. There is a strong, statistically significant, negative correlation between the ages of a TZD Region the percent

**Key Finding:** The maturity of a TZD Region has positive impact on traffic fatalities and serious injuries. With continued growth and support even greater safety outcomes are anticipated!

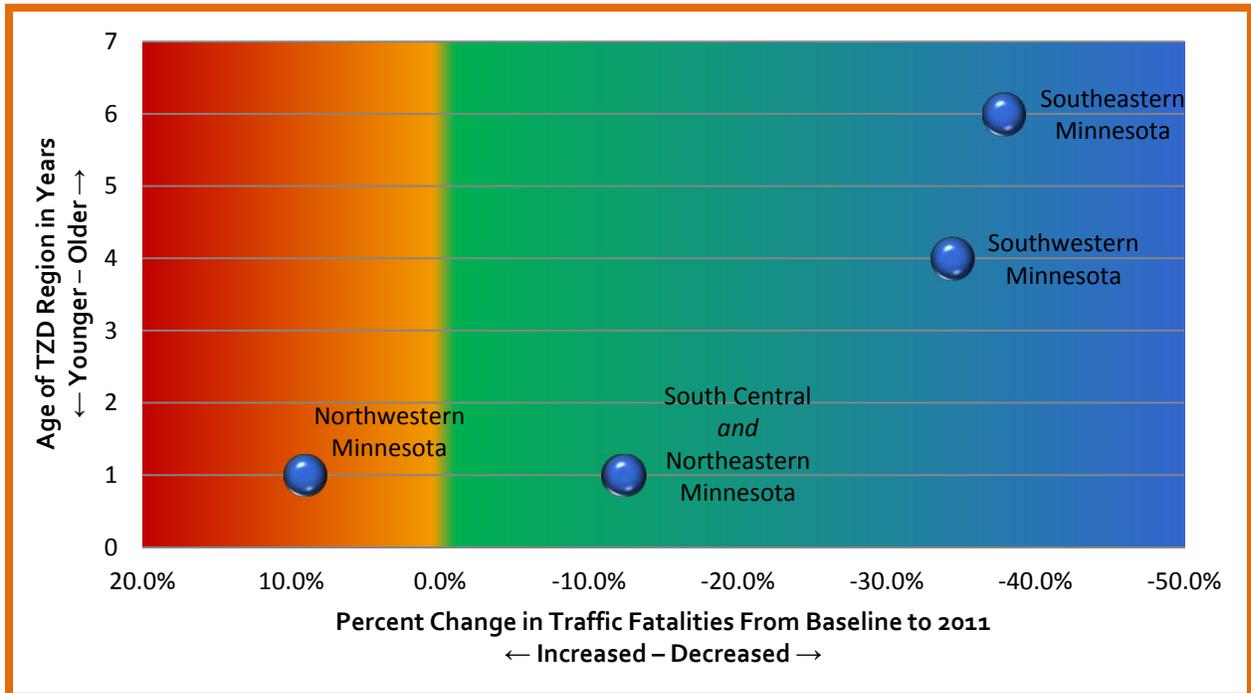
change in traffic fatalities from baseline to 2011. A Pearson’s bivariate correlation was conducted to identify and measure the relationship between the age of a TZD Region, as a proxy for TZD regional efforts, and the percent change in traffic fatalities and serious injuries. In both cases, the relationship is statistically significant at  $p<.10$ , which means that there is a low probability that the relationship is due to random chance, ( $r=-0.885, n=5, p<.049$ ) and ( $r=-0.864, n=5, p<.059$ ) respectively. [Graph 9](#) and [Graph 10](#) illustrate the relationship between the age of a TZD Region and changes in traffic fatalities and severe injuries. The implication being that the

efforts of an established region build greater awareness of traffic safety issues and positive traffic safety culture.

**GRAPH 9: PERCENT CHANGE IN TRAFFIC FATALITIES BY AGE OF MINNESOTA TZD REGION**



**GRAPH 10: PERCENT CHANGE IN TRAFFIC-RELATED SERIOUS INJURIES BY AGE OF TZD REGION**



# CONCLUSION AND RECOMMENDATION

---

The cumulative efforts of TZD Regional Coordinators, partners, and stakeholders are moving Minnesota toward zero traffic fatalities. Local governments and communities are essential partners to TZD Minnesota. Given that TZD Regional maturity *and* local traffic safety participation are strongly associated with regional traffic safety outcomes, the TZD Regions and Regional Coordinators are indispensable to the TZD Mission and traffic safety outcomes.

While great strides are being made, impaired driving and distracted driving are two behaviors that remain a persistent challenge for most TZD Regions followed by speeding and failure to use a seatbelt. Additionally, some regions have lower levels of participation in Safe Roads Grants and TZD Enforcement Grants than others. For these reasons the following recommendations are made:

- ❖ Outreach to counties that do not currently have active TZD efforts.
- ❖ Encourage counties to utilize *Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highways Safety Offices Sixth Edition, 2011*, to inform local traffic safety programs.
- ❖ Provide *County Road Safety Plan* to all counties that do not currently have a CRSP, so county engineers may identify local roadway safety issues and corresponding engineering countermeasures.
- ❖ Encourage counties, cities, and local traffic safety advocates to utilize their *County Road Safety Plans* in order to identify roadway safety needs and inform roadway improvement decisions.
- ❖ Identify the obstacles and unmet needs of each region in order to address impaired and distracted driving.
  - ❖ Recruit strategic partners who may provide insight or have access to target audiences.
  - ❖ Develop a plan by which unmet needs may be matched with local and state resources.
  - ❖ State level support for local programs to address impaired driving and distracted driving.
- ❖ Incentivize local participation in TZD through awards or recognition.
- ❖ Continue to outreach to local partners.

- ❖ Recruit new partners including local government, employers/business, local state representatives, and advocates in the judicial system.
- ❖ Seek out support from statewide TZD Stakeholders for regional TZD efforts.
- ❖ Identify emerging and changing trends through continual crash analyses.
- ❖ Continue local and regional support with vigilant patience. Remember: changing human behavior takes time.

**Future Evaluations:** The 2012 TZD Regional Evaluation will include two more Minnesota TZD Regions for East Central and West Central Minnesota. Additionally, analyses beyond the scope of the established *Regional Evaluation Plans* are planned.

This evaluation attempts to identify the relationship between regional Toward Zero Deaths involvement to traffic safety outcomes. This report is the first effort to identify such a link and was only made possible through cooperation and collaboration between the TZD stakeholders. Expansion of data availability and data quality are anticipated in the coming years, which will greatly improve the rigor and scope of future TZD Regional Evaluations.

This report combines information from multiple government agencies and groups. This report was made possible through the collaboration with:

- ❖ Minnesota Department of Health
- ❖ Minnesota Department of Public Safety, Office of Traffic Safety
- ❖ Minnesota State Patrol
- ❖ Minnesota Department of Transportation, Office of Traffic, Safety, and Technology
- ❖ Minnesota Toward Zero Deaths Regional Coordinators
- ❖ Minnesota Law Enforcement Liaisons
- ❖ Minnesota Network of Employers for Traffic Safety Program Coordinator
- ❖ And many others!

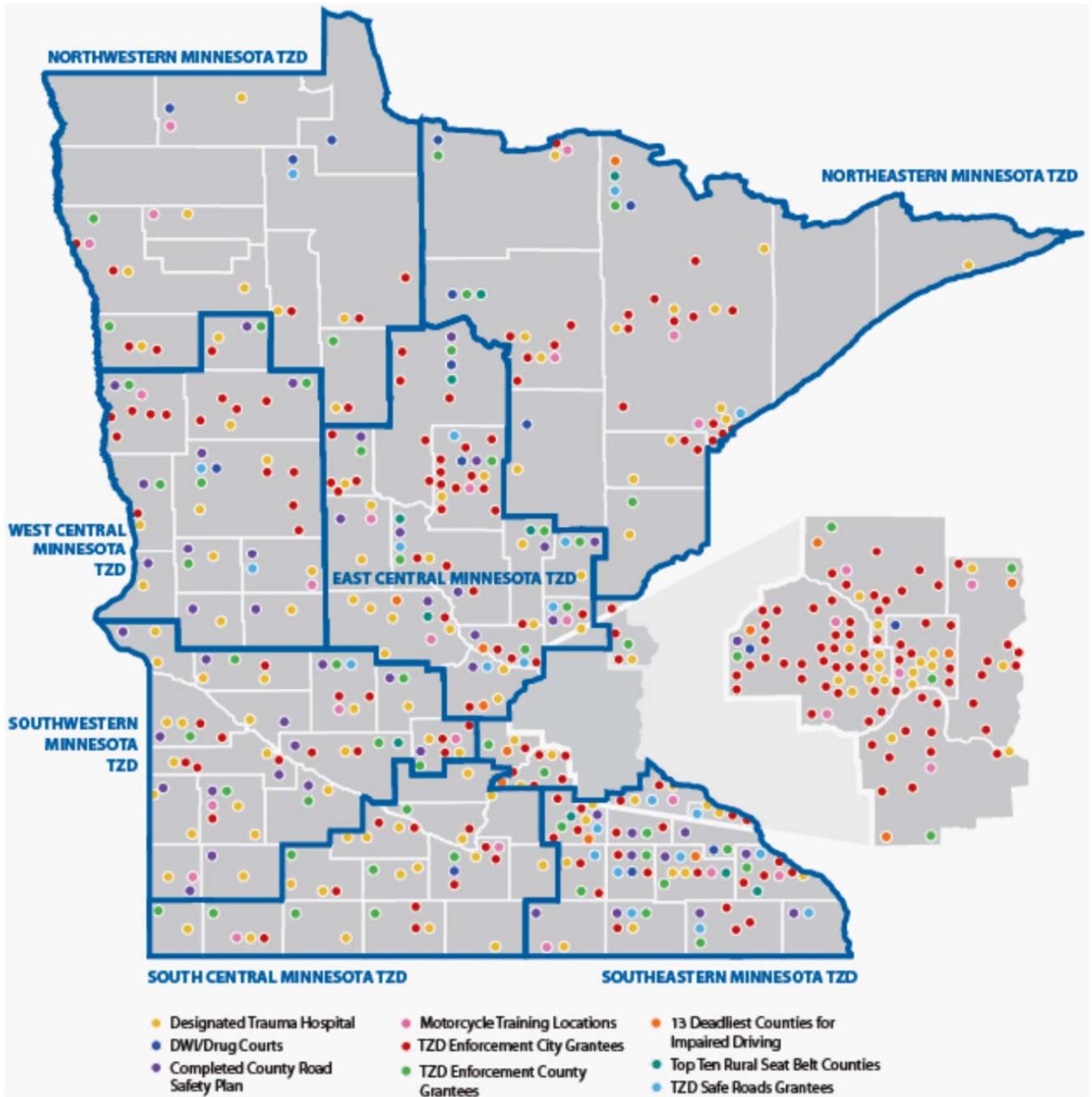
# APPENDICES

---

## APPENDIX A: ABBREVIATIONS AND ACRONYMS

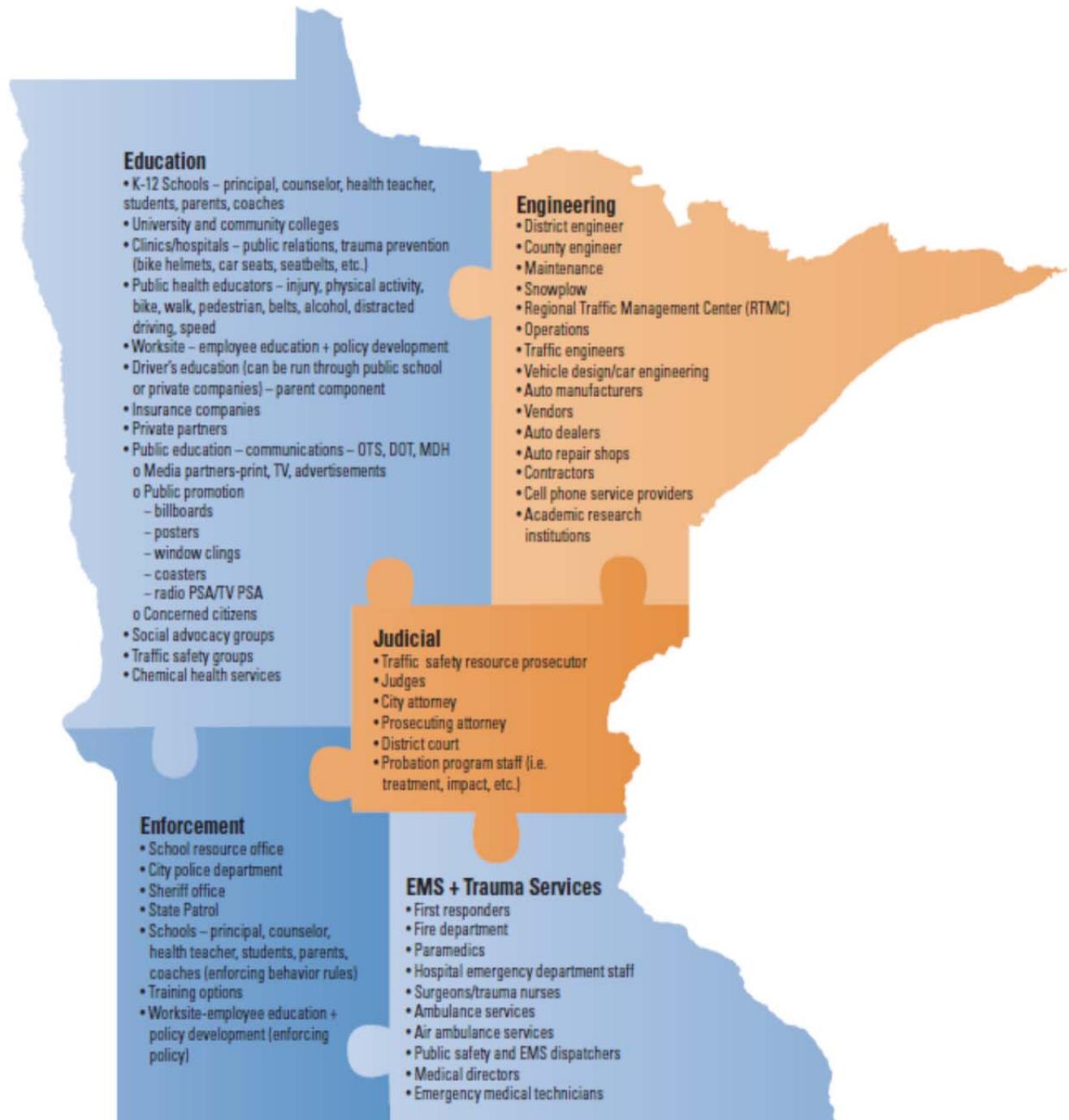
|               |  |
|---------------|--|
| CRSP.....     | <a href="#">County Road Safety Plan</a>  |
| CTS.....      | <a href="#">Center for Transportation Studies at University of Minnesota</a>                         |
| DWI.....      | <a href="#">Driving While Intoxicated</a>  |
| EMS.....      | <a href="#">Emergency Medical Services</a>   |
| Four E's..... | <a href="#">Education, Engineering, Enforcement, and Emergency Medical and Trauma Services</a>       |
| HEAT.....     | <a href="#">High Enforcement of Aggressive Traffic, an education and traffic enforcement program</a> |
| HSIP.....     | <a href="#">Highway Safety Improvement Project</a>   |
| LEL.....      | <a href="#">Law Enforcement Liaison</a>  |
| MDH.....      | <a href="#">Minnesota Department of Health</a>   |
| Mn/DOT.....   | <a href="#">Minnesota Department of Transportation</a>   |
| Mn/DPS.....   | <a href="#">Minnesota Department of Public Safety</a>  |
| MSP.....      | <a href="#">Minnesota State Patrol</a>   |
| NETS.....     | <a href="#">Minnesota Network of Employers for Traffic Safety</a>                                    |
| OTS.....      | <a href="#">Office of Traffic Safety, Mn/DPS</a>   |
| OTST.....     | <a href="#">Office of Traffic, Safety, and Technology, Mn/DOT</a>                                    |
| TIS.....      | <a href="#">Transportation Information System used by Mn/DOT</a>                                     |
| TZD.....      | <a href="#">Minnesota Toward Zero Deaths</a>   |
| U of M.....   | <a href="#">University of Minnesota</a>  |
| UMD.....      | <a href="#">University of Minnesota, Duluth</a>  |

**APPENDIX B: MAP OF MINNESOTA TZD REGIONS AND LOCAL MINNESOTA TRAFFIC SAFETY PROGRAMS**



Source: (Center for Transportation Studies, University of Minnesota, 2012)

## APPENDIX C: MINNESOTA TZD ROADMAP OF PARTNERS



*Driven by data, best practices, and research*



*Because your life counts*  
[www.minnesotatzd.org](http://www.minnesotatzd.org)

Source: <http://www.minnesotatzd.org/about/index.html>

## APPENDIX D: 2011 AND 2012 SAFE AND SOBER CALENDAR

### Safe & Sober 2011 Calendar

| S                | M  | T  | W  | T  | F  | S  | S               | M  | T  | W  | T  | F  | S  | S               | M  | T  | W  | T  | F  | S  | S               | M  | T  | W  | T  | F  | S  |
|------------------|----|----|----|----|----|----|-----------------|----|----|----|----|----|----|-----------------|----|----|----|----|----|----|-----------------|----|----|----|----|----|----|
| <b>SEPTEMBER</b> |    |    |    |    |    |    | <b>OCTOBER</b>  |    |    |    |    |    |    | <b>NOVEMBER</b> |    |    |    |    |    |    | <b>DECEMBER</b> |    |    |    |    |    |    |
| 5                | 6  | 7  | 8  | 9  | 10 | 11 | 3               | 4  | 5  | 6  | 7  | 8  | 9  | 31              | 1  | 2  | 3  | 4  | 5  | 6  | 5               | 6  | 7  | 8  | 9  | 10 | 11 |
| 12               | 13 | 14 | 15 | 16 | 17 | 18 | 10              | 11 | 12 | 13 | 14 | 15 | 16 | 7               | 8  | 9  | 10 | 11 | 12 | 13 | 12              | 13 | 14 | 15 | 16 | 17 | 18 |
| 19               | 20 | 21 | 22 | 23 | 24 | 25 | 17              | 18 | 19 | 20 | 21 | 22 | 23 | 14              | 15 | 16 | 17 | 18 | 19 | 20 | 19              | 20 | 21 | 22 | 23 | 24 | 25 |
| 26               | 27 | 28 | 29 | 30 | 24 | 25 | 26              | 27 | 28 | 29 | 30 | 21 | 22 | 23              | 24 | 25 | 26 | 27 | 26 | 27 | 28              | 29 | 30 | 31 |    |    |    |
| <b>JANUARY</b>   |    |    |    |    |    |    | <b>FEBRUARY</b> |    |    |    |    |    |    | <b>MARCH</b>    |    |    |    |    |    |    | <b>APRIL</b>    |    |    |    |    |    |    |
| 2                | 3  | 4  | 5  | 6  | 7  | 8  | 30              | 31 | 1  | 2  | 3  | 4  | 5  | 6               | 7  | 8  | 9  | 10 | 11 | 12 | 3               | 4  | 5  | 6  | 7  | 8  | 9  |
| 9                | 10 | 11 | 12 | 13 | 14 | 15 | 6               | 7  | 8  | 9  | 10 | 11 | 12 | 13              | 14 | 15 | 16 | 17 | 18 | 19 | 10              | 11 | 12 | 13 | 14 | 15 | 16 |
| 16               | 17 | 18 | 19 | 20 | 21 | 22 | 20              | 21 | 22 | 23 | 24 | 25 | 26 | 20              | 21 | 22 | 23 | 24 | 25 | 26 | 17              | 18 | 19 | 20 | 21 | 22 | 23 |
| 23               | 24 | 25 | 26 | 27 | 28 | 29 | 27              | 28 | 27 | 28 | 29 | 30 | 31 | 24              | 25 | 26 | 27 | 28 | 29 | 30 |                 |    |    |    |    |    |    |
| <b>MAY</b>       |    |    |    |    |    |    | <b>JUNE</b>     |    |    |    |    |    |    | <b>JULY</b>     |    |    |    |    |    |    | <b>AUGUST</b>   |    |    |    |    |    |    |
| 1                | 2  | 3  | 4  | 5  | 6  | 7  | 5               | 6  | 7  | 8  | 9  | 10 | 11 | 3               | 4  | 5  | 6  | 7  | 8  | 9  | 1               | 2  | 3  | 4  | 5  | 6  |    |
| 8                | 9  | 10 | 11 | 12 | 13 | 14 | 12              | 13 | 14 | 15 | 16 | 17 | 18 | 10              | 11 | 12 | 13 | 14 | 15 | 16 | 7               | 8  | 9  | 10 | 11 | 12 | 13 |
| 15               | 16 | 17 | 18 | 19 | 20 | 21 | 19              | 20 | 21 | 22 | 23 | 24 | 25 | 17              | 18 | 19 | 20 | 21 | 22 | 23 | 14              | 15 | 16 | 17 | 18 | 19 | 20 |
| 22               | 23 | 24 | 25 | 26 | 27 | 28 | 26              | 27 | 28 | 29 | 30 | 24 | 25 | 26              | 27 | 28 | 29 | 30 | 21 | 22 | 23              | 24 | 25 | 26 | 27 |    |    |
| 29               | 30 | 31 | 23 | 24 | 25 | 26 | 27              | 28 | 29 | 30 | 31 | 28 | 29 | 30              | 31 |    |    |    |    |    |                 |    |    |    |    |    |    |
| <b>SEPTEMBER</b> |    |    |    |    |    |    | <b>OCTOBER</b>  |    |    |    |    |    |    |                 |    |    |    |    |    |    |                 |    |    |    |    |    |    |
| 4                | 5  | 6  | 7  | 8  | 9  | 10 | 2               | 3  | 4  | 5  | 6  | 7  | 8  |                 |    |    |    |    |    |    |                 |    |    |    |    |    |    |
| 11               | 12 | 13 | 14 | 15 | 16 | 17 | 9               | 10 | 11 | 12 | 13 | 14 | 15 |                 |    |    |    |    |    |    |                 |    |    |    |    |    |    |
| 18               | 19 | 20 | 21 | 22 | 23 | 24 | 16              | 17 | 18 | 19 | 20 | 21 | 22 |                 |    |    |    |    |    |    |                 |    |    |    |    |    |    |
| 25               | 26 | 27 | 28 | 29 | 30 | 23 | 24              | 25 | 26 | 27 | 28 | 29 |    |                 |    |    |    |    |    |    |                 |    |    |    |    |    |    |
|                  |    |    |    |    |    |    | 30              | 31 |    |    |    |    |    |                 |    |    |    |    |    |    |                 |    |    |    |    |    |    |

### 2011 Safe & Sober Important Dates

Friday, October 1, 2010: Lists of Eligible Officers, Media Contacts, Informal Belt Survey Sites, Objectives and Plan for Oct. Belt Wave

Monday-Tuesday, October 25-26: Toward Zero Deaths Conference, St. Paul.

3:00 p.m., Tuesday, November 2, 2010: Short wave report on number of belt citations written by entire department during Oct 8-28. Each agency in the grant completes and submits separately.

Monday, November 8, 2010: Plan for Dec. DWI wave. Plan includes all agencies.

Friday, November 19, 2010: Full Wave Report & Invoice on S&S overtime worked October 8-28. Report and invoice includes all agencies.

3:00 p.m., Friday, January 7, 2011: Short wave report on number of DWIs written by entire department during the month of December. Each agency in the grant completes and submits separately.

Friday, January 21, 2011: Full Wave Report & Invoice on S&S overtime worked Dec. 2-4, 9-11, and 16-18. Report and Invoice includes all agencies.

Thursday, April 21, 2011: Distracted Driving Enforcement Day.

Monday, May 2, 2011: Plan (includes all agencies) for May Mobilization.

Friday, May 13, 2011, Full Wave Report & Invoice on S&S overtime worked for Distracted Driving Day. Report and Invoice includes all agencies.

3:00 p.m., Friday, June 10, 2011: Short wave report on informal belt survey results and number of belt citations written by entire department May 23 – June 5. Each agency in the grant completes and submits separately.

Monday, June 13, 2011: Plan for 7 Days of Speed and Motorcycle enforcement waves. Plan includes all agencies.

Friday, July 8, 2011: Full Wave Report & Invoice on S&S overtime worked May 23 -- June 5. Report and Invoice includes all agencies.

Monday, August 1, 2011: Plan for Labor Day DWI wave. Plan includes all agencies.

3:00 p.m., Friday August 5, 2011: Short wave report on number of speed cites written by entire department during July. Each agency in the grant completes and submits separately.

Wednesday, August 31, 2011: Optional "Move Over Law" Enforcement Day.

Friday, August 19, 2011: Full Wave Report & Invoice on S&S overtime worked during July. Report and Invoice cover all agencies in the grant.

3:00 p.m., Friday, September 9, 2011: Short wave report on number of DWIs written by entire department Aug. 19 – Sept 3. Each agency in the grant completes and submits separately.

Friday, September 23, 2011: Full Wave Report & Invoice on S&S overtime worked Aug. 19 – Sept 3. Report and Invoice includes all agencies.

Friday, September 30, 2011: Final report of progress towards objectives.

| Name of Event Focus       | Pre-Enforcement Media (Partner with Safe Communities) | Enhanced Enforcement   | Post-Enforcement Media (Partner with Safe Communities) |
|---------------------------|---|--|--|
| October Belts/Child Seats | Oct. 1-7, 2010  | Oct. 8-28, 2010 *<br>* 50% of hours must be between 19:00 and 05:00                                  | Oct. 29-Nov 4, 2010                                    |
| Holidays Parties DWI      | Nov. 24 – Dec. 1, 2010                                | Dec. 2-4, 9-11, and 16-18, 2010  | Dec. 31, 2010 – Jan. 6, 2011                           |
| Distracted Driving        |   | April 21, 2011   |  |
| May Belts/Child Seats     | May 15-22, 2011<br>Informal Survey May 2 - May 8      | May 23 – June 5, 2011*<br>* 50% of hours must be between 19:00 and 05:00                             | June 6-10, 2011<br>Informal Survey June 3 - 10         |
| July Speed and Motorcycle | June 23-29, 2011                                      | Seven days in July decided jointly with other agencies, to include Saturdays between 14:00 and 22:00 | Before Labor Day announced to the media                |
| August Move Over Day      |   | Aug. 31 <sup>st</sup> , 2011   |  |
| Labor Day DWI             | Aug. 12-18, 2011                                      | Aug. 19 – Sept. 3, 2011 (Further Focus on Weekends)  | September 6-12, 2011                                   |



Department of Public Safety  
Office of Traffic Safety  
444 Cedar Street, Suite 150  
St. Paul, MN 55101-5150

Phone: 651-201-7060  
Fax: 651-297-4844  
Web: <http://www.dps.state.mn.us/ots>

## 2012 Enforcement Calendar

| S              | M  | T  | W  | T  | F  | S  | S             | M  | T  | W  | T  | F  | S  | S             | M  | T  | W  | T  | F  | S  | S             | M  | T  | W  | T  | F  | S  |
|----------------|----|----|----|----|----|----|---------------|----|----|----|----|----|----|---------------|----|----|----|----|----|----|---------------|----|----|----|----|----|----|
| SEPTEMBER 2011 |    |    |    |    |    |    | OCTOBER 2011  |    |    |    |    |    |    | NOVEMBER 2011 |    |    |    |    |    |    | DECEMBER 2011 |    |    |    |    |    |    |
| 4              | 5  | 6  | 7  | 8  | 9  | 10 | 2             | 3  | 4  | 5  | 6  | 7  | 8  | 30            | 31 | 1  | 2  | 3  | 4  | 5  | 4             | 5  | 6  | 7  | 8  | 9  | 10 |
| 11             | 12 | 13 | 14 | 15 | 16 | 17 | 9             | 10 | 11 | 12 | 13 | 14 | 15 | 6             | 7  | 8  | 9  | 10 | 11 | 12 | 11            | 12 | 13 | 14 | 15 | 16 | 17 |
| 18             | 19 | 20 | 21 | 22 | 23 | 24 | 16            | 17 | 18 | 19 | 20 | 21 | 22 | 13            | 14 | 15 | 16 | 17 | 18 | 19 | 18            | 19 | 20 | 21 | 22 | 23 | 24 |
| 25             | 26 | 27 | 28 | 29 | 30 |    | 23            | 24 | 25 | 26 | 27 | 28 | 29 | 20            | 21 | 22 | 23 | 24 | 25 | 26 | 25            | 26 | 27 | 28 | 29 | 30 | 31 |
| JANUARY 2012   |    |    |    |    |    |    | FEBRUARY 2012 |    |    |    |    |    |    | MARCH 2012    |    |    |    |    |    |    | APRIL 2012    |    |    |    |    |    |    |
| 1              | 2  | 3  | 4  | 5  | 6  | 7  | 1             | 2  | 3  | 4  |    |    |    | 4             | 5  | 6  | 7  | 8  | 9  | 10 | 1             | 2  | 3  | 4  | 5  | 6  | 7  |
| 8              | 9  | 10 | 11 | 12 | 13 | 14 | 5             | 6  | 7  | 8  | 9  | 10 | 11 | 11            | 12 | 13 | 14 | 15 | 16 | 17 | 8             | 9  | 10 | 11 | 12 | 13 | 14 |
| 15             | 16 | 17 | 18 | 19 | 20 | 21 | 12            | 13 | 14 | 15 | 16 | 17 | 18 | 18            | 19 | 20 | 21 | 22 | 23 | 24 | 15            | 16 | 17 | 18 | 19 | 20 | 21 |
| 22             | 23 | 24 | 25 | 26 | 27 | 28 | 19            | 20 | 21 | 22 | 23 | 24 | 25 | 11            | 12 | 13 | 14 | 15 | 16 | 17 | 22            | 23 | 24 | 25 | 26 | 27 | 28 |
| 29             | 30 | 31 |    |    |    |    | 26            | 27 | 28 | 29 |    |    |    | 25            | 26 | 27 | 28 | 29 | 30 | 31 | 29            | 30 |    |    |    |    |    |
| MAY 2012       |    |    |    |    |    |    | JUNE 2012     |    |    |    |    |    |    | JULY 2012     |    |    |    |    |    |    | AUGUST 2012   |    |    |    |    |    |    |
| 6              | 7  | 8  | 9  | 10 | 11 | 12 | 3             | 4  | 5  | 6  | 7  | 8  | 9  | 1             | 2  | 3  | 4  | 5  | 6  | 7  | 5             | 6  | 7  | 8  | 9  | 10 | 11 |
| 13             | 14 | 15 | 16 | 17 | 18 | 19 | 10            | 11 | 12 | 13 | 14 | 15 | 16 | 8             | 9  | 10 | 11 | 12 | 13 | 14 | 12            | 13 | 14 | 15 | 16 | 17 | 18 |
| 20             | 21 | 22 | 23 | 24 | 25 | 26 | 17            | 18 | 19 | 20 | 21 | 22 | 23 | 15            | 16 | 17 | 18 | 19 | 20 | 21 | 19            | 20 | 21 | 22 | 23 | 24 | 25 |
| 27             | 28 | 29 | 30 | 31 |    |    | 24            | 25 | 26 | 27 | 28 | 29 | 30 | 22            | 23 | 24 | 25 | 26 | 27 | 28 | 26            | 27 | 28 | 29 | 30 | 31 |    |
| SEPTEMBER 2012 |    |    |    |    |    |    | OCTOBER 2012  |    |    |    |    |    |    |               |    |    |    |    |    |    |               |    |    |    |    |    |    |
| 30             |    |    |    |    |    | 1  | 1             | 2  | 3  | 4  | 5  | 6  | 7  |               |    |    |    |    |    |    |               |    |    |    |    |    |    |
| 2              | 3  | 4  | 5  | 6  | 7  | 8  | 8             | 9  | 10 | 11 | 12 | 13 | 14 |               |    |    |    |    |    |    |               |    |    |    |    |    |    |
| 9              | 10 | 11 | 12 | 13 | 14 | 15 | 15            | 16 | 17 | 18 | 19 | 20 | 21 |               |    |    |    |    |    |    |               |    |    |    |    |    |    |
| 16             | 17 | 18 | 19 | 20 | 21 | 22 | 22            | 23 | 24 | 25 | 26 | 27 | 28 |               |    |    |    |    |    |    |               |    |    |    |    |    |    |
| 23             | 24 | 25 | 26 | 27 | 28 | 29 | 29            | 30 | 31 |    |    |    |    |               |    |    |    |    |    |    |               |    |    |    |    |    |    |

## 2012 Important Dates

Friday, **Sept. 30**, 2011: Signed grant agreement, resolution from lead agency, first quarter plan, lists of eligible officers and informal belt survey sites.

5:00 p.m., Tuesday, **Nov. 1**, 2011: Short wave report on number of belt citations written by entire department during Oct 14-27. Each agency in the grant completes and submits separately.

Tuesday, **Dec. 15**: Plan for Second Quarter. Wednesday-Thursday, **Nov. 16-17**: Toward Zero Deaths Conference, Duluth.

Friday, **Jan. 20**: First Quarter report and invoice from lead agency.  
5:00 p.m., Friday, **Jan. 6**, 2012: Short wave report on number of DWIs written by entire department during the month of December. Each agency in the grant completes and submits separately.

Wednesday, **Feb. 15**: Plan for Third Quarter.

Friday, **April 20**: Second Quarter report and invoice from lead agency.  
Tuesday, **May 15**: Plan for Fourth Quarter.

5:00 p.m., Friday, **June 8**, 2012: Short wave report on informal belt survey results and number of belt citations written by entire department May 21 – June 3.

Each agency in the grant completes and submits separately.  
Friday, **July 20**: Third Quarter report and invoice from lead agency.

5:00 p.m., Friday **Aug. 3**, 2012: Short wave report on number of speed cites written by entire department during July. Each agency in the grant completes and submits separately.

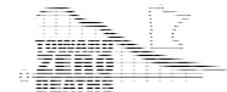
5:00 p.m., Friday, **Sept. 7**, 2012: Short wave report on number of DWIs written by entire department Aug. 17 – Sept 3. Each agency in the grant completes and submits separately.

Friday, **Oct. 19**, 2012: Final invoice, report, and progress towards performance measures.

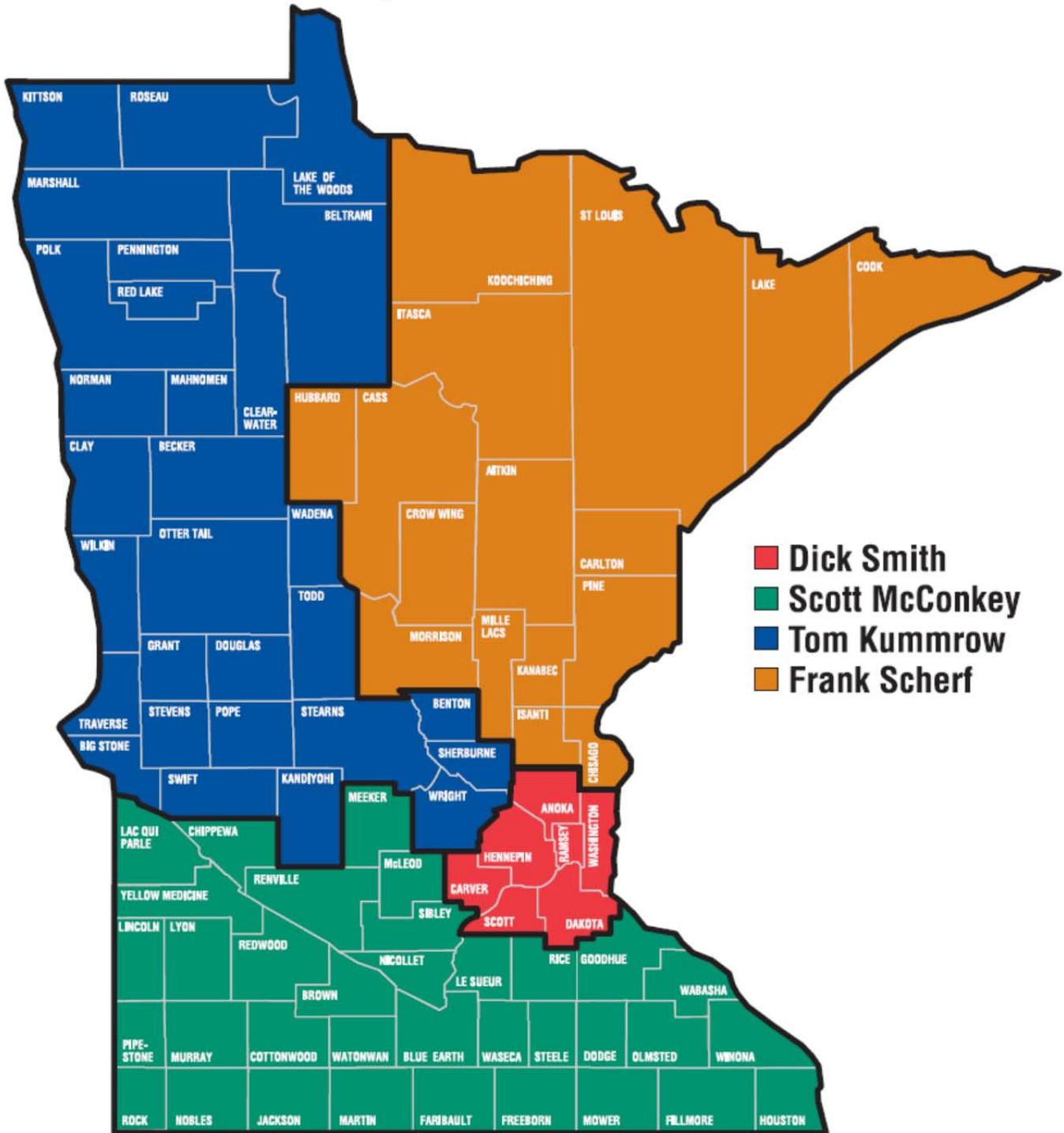
## Department of Public Safety - Office of Traffic Safety

444 Cedar Street, Suite 150  
St. Paul, MN 55101-5150

Phone: 651-201-7060  
Fax: 651-297-4844

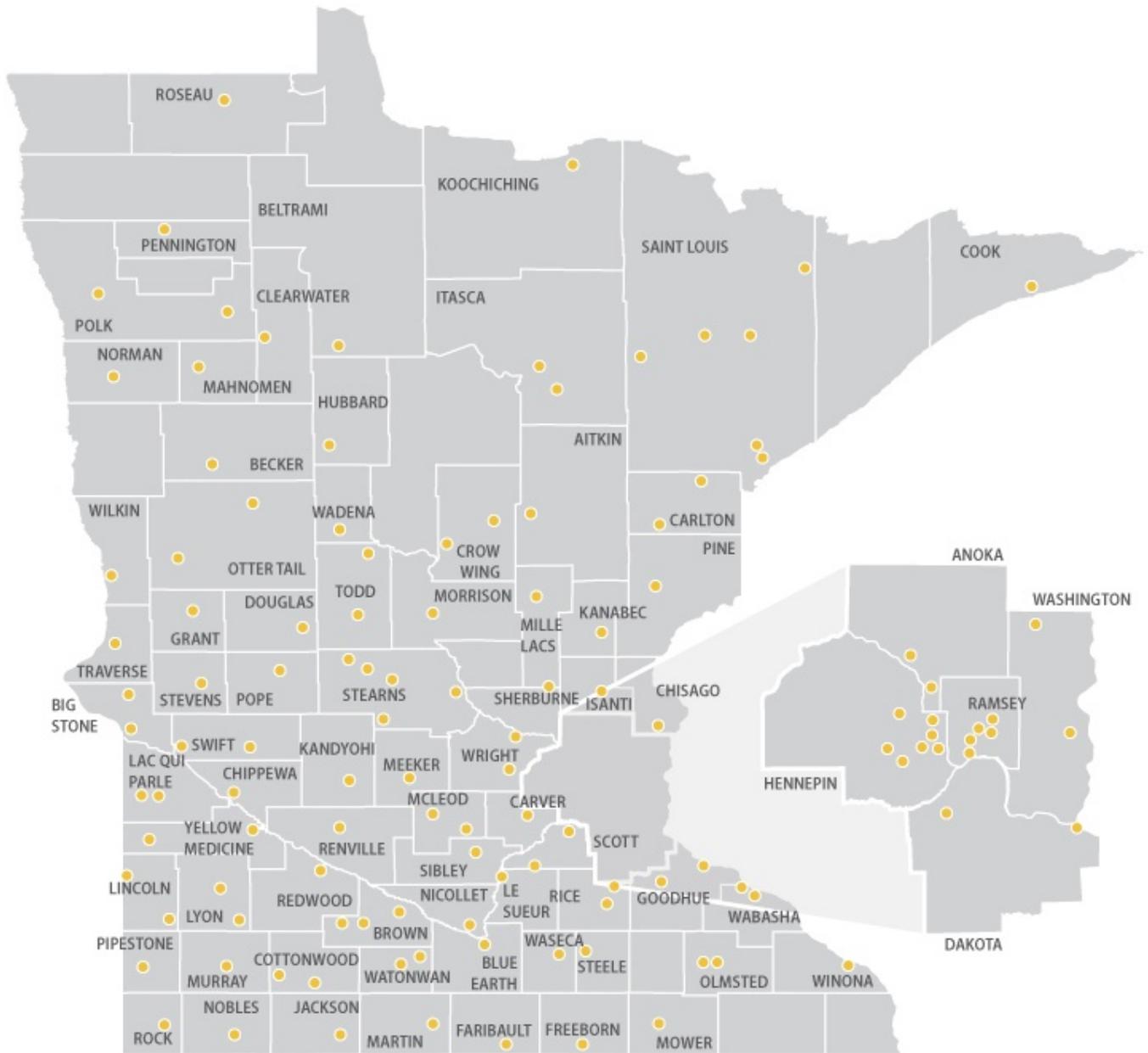


## APPENDIX E: MINNESOTA LAW ENFORCEMENT LIAISONS



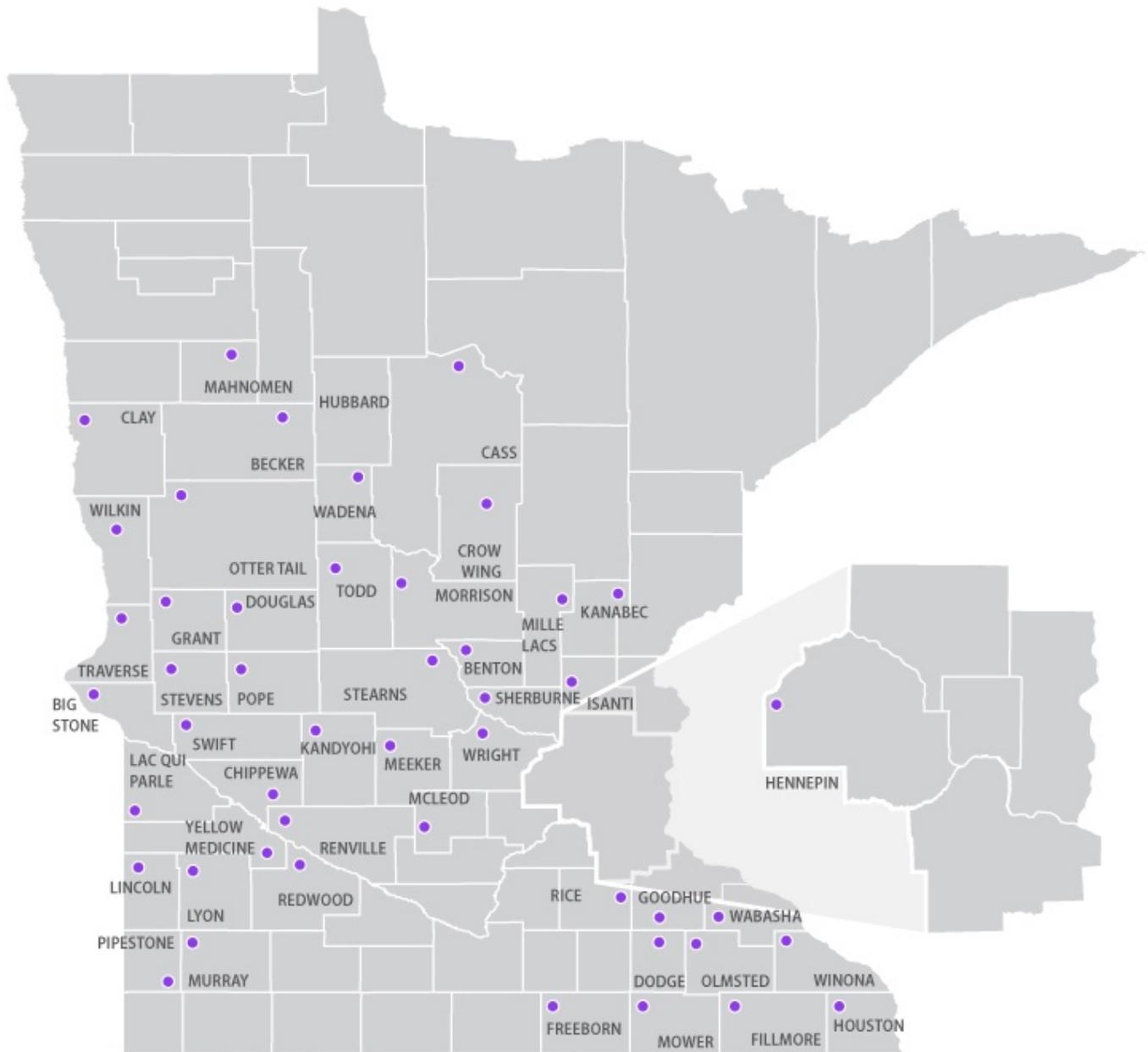
SOURCE: (Minnesota DPS-OTS, 2012)

## APPENDIX F: DESIGNATED TRAUMA HOSPITALS



Source: (Center for Transportation Studies, University of Minnesota, 2012).

## APPENDIX G: COMPLETED COUNTY ROAD SAFETY PLANS



Source: (Center for Transportation Studies, University of Minnesota, 2012)

# REFERENCES

---

- TZD Safe Roads Program*. (2012). Retrieved July 1, 2012, from Minnesota Toward Zero Deaths:  
<http://www.minnesotatzd.org/network/saferoads/>
- Accora Research, Inc. (2011). *Mn/DOT Omnibus Study 2010*. Minnesota Department of Transportation.
- Berger, D. (2012). Director, DPS-OTS. (M.-O. Katie Fleming, Interviewer)
- Blalock, H. M. (1972). *Social Statistics*. New York: McGraw-Hill.
- Center for Transportation Studies. (2010). *Designated Trauma Hospitals*. Retrieved July 2012, from Minnesota Toward Zero Deaths: <http://www.minnesotatzd.org/network/maps/trauma.html>
- Center for Transportation Studies, University of Minnesota. (2012). *Completed County Road Safety Plans*. Retrieved July 2012, from Minnesota Toward Zero Deaths:  
<http://www.minnesotatzd.org/network/maps/safety.html>
- Center for Transportation Studies, University of Minnesota. (2012). *Designated Trauma Hospitals*. Retrieved July 2012, from Minnesota Toward Zero Deaths: <http://www.minnesotatzd.org/network/maps/trauma.html>
- Center for Transportation Studies, University of Minnesota. (2012). *Minnesota TZD Network Members*. Retrieved July 2012, from Minnesota Toward Zero Deaths:  
<http://www.minnesotatzd.org/network/maps/index.html>
- Department of Public Safety, O. o. (2012). *Law Enforcement Liasons*. Retrieved July 23, 2012, from  
<https://dps.mn.gov/divisions/ots/law-enforcement/Pages/law-enforcement-liasons.aspx>
- Fleming, K. (2012). Research Analysis Specialist Senior, Mn/DOT-OTST. (M.-O. Katie Fleming, Interviewer)
- Henkel, R. E. (1976). *Tests of Significance: Quantitative Applications in the Social Sciences Series*. Newbury Park: Sage Publications.
- Hernandez, K. (2011). *TZD Southeast Minnesota 2010-2011 End of Year Report*.
- Kirk, K. (2012). Program Coordinator, Center for Transportation Studies, University of Minnesota. (M.-O. Katie Fleming, Interviewer)
- Kons, L. (2011). NETS Coordinator. (K. F. Mn/DOT-OTST, Interviewer)
- Kostrzewski, H. (2011). *Northeast Minnesota Toward Zero Deaths 2011 Annual Report*.
- Kostrzewski, H. (2011). *Northwestern Minnesota Toward Zero Deaths 2011 Annual Report*.
- Kummrow, T. (2012). Northwestern Minnesota Law Enforcement Liaison. (M.-O. Katie Fleming, Interviewer)

- Leuer, D. (2012). Assistant State Traffic Safety Engineer, Mn/DOT-OTST. (M.-O. Katie Fleming, Interviewer)
- McConkey, S. (2012). Southern Minnesota Law Enforcement Liaison. (M.-O. Katie Fleming, Interviewer)
- Minnesota Department of Health. (2011, April 25). *Minnesota Statewide Trauma System*. Retrieved July 2012, from Minnesota Department of Health: <http://www.health.state.mn.us/traumasystem/>
- Minnesota DPS-OTS. (2012). *Law Enforcement Liaisons* . Retrieved July 2012, from Office of Traffic Safety : <https://dps.mn.gov/divisions/ots/law-enforcement/Pages/law-enforcement-liasons.aspx>
- Mn/DOT-OTST. (2009). *HEAT - Highway Enforcement of Aggressive Traffic*. Retrieved July 1, 2012, from Minnesota Dartment of Transportation: <http://www.dot.state.mn.us/hottopics/speedlimits/index.html>
- Mn/DOT-SALT. (2011, December 14). *County Road Safety Plans*. Retrieved July 1, 2012, from Minnesota Department of Transportation: [http://www.dot.state.mn.us/stateaid/sa\\_county\\_traffic\\_safety\\_plans.html](http://www.dot.state.mn.us/stateaid/sa_county_traffic_safety_plans.html)
- Pehrson, G. (2012). Youth Traffic Safety & Alcohol Coordinator, DPS-OTS. (M.-O. Katie Fleming, Interviewer)
- Roggenbuck, A. (2011). *South Central Minnesota Toward Zero Deaths Region Annual Report 2010-11*.
- Roggenbuck, A. (2011). *Southwestern Minnesota Toward Zero Deaths Region Annual Report 2010-2011*.
- Scherf, F. (2012). Northeastern Minnesota Law Enforcement Liaison. (K. F. Mn/DOT-OTST, Interviewer)
- Swanson, S. (2012). Enforcement & Community Outreach Coordinator DPS-OTS. (M.-O. Katie Fleming, Interviewer)
- Wackerly, D. D., Mendenhall III, W., & and Scheaffer, R. L. (2008). *Mathematical Statistic with Applications*. Belmont, CA: Thomson Learning, Inc.
- Welcome to Minnesota NETS!* (n.d.). Retrieved July 1, 2012, from Minnesota Network of Employers for Traffic Safety : <http://www.mnsafetycouncil.org/nets/>
- Whitcher, J. (2012). HSIP Coordinator, Mn/DOT-OTST. (M.-O. Katie Fleming, Interviewer)