

5.8 MULTI-MODAL SAFETY

INTRODUCTION

Public safety is by far the most important element considered in every transportation project. Its significance begins with federal goals and policies, continues with state transportation goals and on to the regional and local planning level. Safety is one of the planning factors in the FAST Act that must guide state and regional transportation planning. The federal planning factors can be found in the RTP Goals and Policies, Chapter 2. According to the Bureau of Transportation Statistics' (BTS) Safety data Action Plan:

"Deaths and injuries are a major cost in transportation. Transportation fatalities rank third as the cause of lost years of life in the U.S. (behind heart disease and cancer). Several travel modes have death counts whose impact exceeds that of AIDS. But the Department of Transportation has not yet responded to this public health threat by developing data programs as capable as those used in the federal medical community."

This chapter and addresses the following:

- The context for Rogue Valley transportation safety;
- A discussion of the potential role of the RVMPO in transportation safety planning;
- Rogue Valley crash data; and
- Recommendations for further RVMPO safety work.

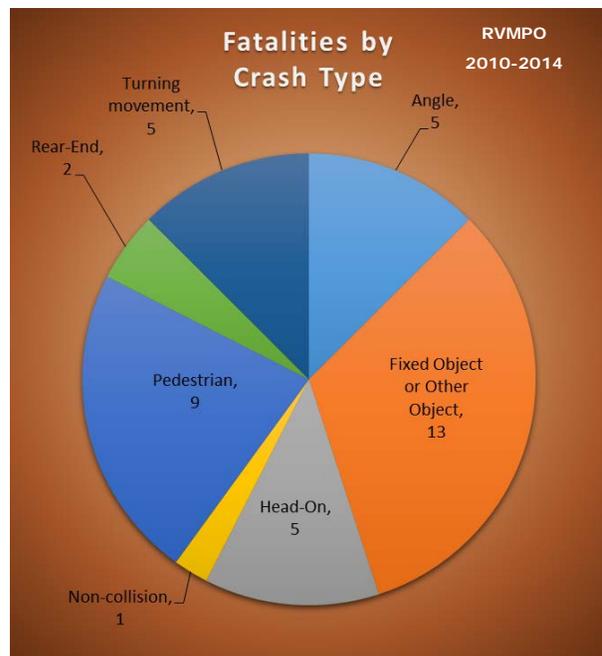


Figure 5.8.1: Fatalities by Crash Type, 2010-2014

The ideal situation is that all elements of the multi-modal transportation system are safe. However, that is not always the case and plans must be made for elimination of physical transportation infrastructure hazards and problems to create a safer travel environment.

Safety often is discussed along with security, but the two are different and must be addressed separately because they involve different issues and circumstances. The simplest distinction between safety and security is that safety problems, crashes, are unpremeditated unfortunate events. As such, they may be caused by driver error or impairment, adverse weather, a temporary hazard in the right-of-way, poor infrastructure, poor vehicle design, inadequate vehicle maintenance, or all of the above. By contrast, security events always connote a negative intention (See Security Chapter 5.9).

SAFETY DATA AND CRASH INFORMATION

At present, crash data comes from many varied sources. For national information, there's the National Highway Safety Administration and the Bureau of Transportation Statistics. The National Center for Health Statistics and the National Safety Council also provide statistics and summaries. At the state level ODOT maintains data on crashes on all public roads, and produces an annual evaluation of the Oregon Traffic Safety Performance Plan. It contains data by type and region. Table 5.1 summarizes fatalities in the southern Oregon area by county. Additional statewide information is available on the web at www.oregon.gov/ODOT/TS.

Table 5.8.1: Fatalities by County

	2010	2011	2012	2013	2014	% Change 2010-2014
Coos County	10	15	5	6	11	10.0%
Curry County	8	3	0	3	4	-50.0%
Douglas County	21	12	15	13	27	28.6%
Jackson County	16	21	14	15	17	6.3%
Josephine County	12	13	18	12	13	8.3%
Region 3 Total	67	64	52	49	72	7.5%
Statewide Fatalities	317	331	336	313	356	12.3%
Region 3 Fatalities Percent of State	21.14%	19.34%	15.48%	15.65%	20.22%	-4.3%
						ODOT 2014

The RVMPO conducted a Safety Profile of the planning area, expected to be completed in 2017, drawing on data maintained by ODOT on state and local roads in the 2010-2014 timeframe. The Profile was identified in the 2034 RTP as one of the actions RVMPO could undertake to improve safety by compiling and disseminating information. The profile report consists of three parts: a region-wide analysis of injury and fatal accidents; a detailed crash analysis of seven regionally significant corridors in the planning area; and a summary of national and statewide safety planning efforts. The 2034 RTP also suggested that the RVMPO consider safety and crash records in the project-evaluation process. This was done in the subsequent MTIP's. This RTP continues the effort to elevate the significance of traffic safety by identifying four safety-related performance measures.

RTP Performance Indicators – Safety

This RTP introduces Performance Indicators as a tool to help the region measure its success in achieving desired outcomes from goals, strategies and funding decisions. The policy chapter of the plan contains indicators for all of the RTP's goals. The goal addressing safety includes the following performance measures:

- ✓ Measured reduction in number and severity of injury and fatal crashes.
- ✓ Measured reduction in number of non-injury crashes.
- ✓ Increase in safety education.
- ✓ Incorporate crash history/safety concerns in project evaluation.

The 2017 Safety Profile focuses on both location and human safety. The locational approach was used to estimate crash rates and begin the process of identifying possible locations for safety improvements. Crashes on the seven selected corridors were mapped, and crash rates per Vehicle Mile Traveled by road segment were estimated. The corridors chosen for this project were: Pine Street/Biddle Road; Foothill Road; OR Hwy 99; OR Hwy 62; OR Hwy 238; North Phoenix Road; and Table Rock Road. Both injury and non-injury incidents were included here.

Injury crashes were examined throughout the RVMPO planning area, regardless of location, reflecting the greater seriousness of these incidents. This portion of the profile also looked at the roll two key risk factors – consumption of intoxicants and seatbelt use – played in crashes that resulted in injury. In the case of drug and alcohol use, RVMPO found that while intoxicants are linked to a comparatively small number of crashes, they account for 30 percent of all traffic fatalities. The number of intoxicant-related crashes may be lower than many other areas, but when they do occur they are more likely to be serious. To help planners and others consider the relative seriousness of the region’s crash record, the RVMPO Safety Profile includes state and national data.

As the first profile for the planning area, it is anticipated that future safety profiles will identify changing conditions, and indicate the impact transportation projects have (or do not have) on crashes. This RTP includes projects located on several of the corridors examined in the survey, including the expressway bypass on Hwy. 62, a project to widen segments of Table Rock Road, and other improvements to segments of Hwy 99 and North Phoenix Road.

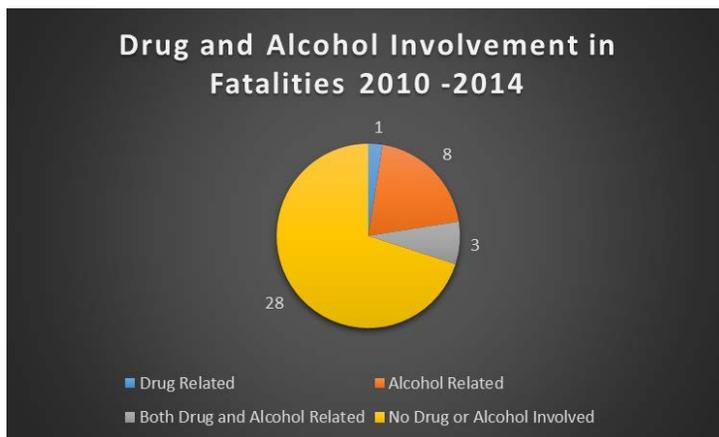


Figure 5.8.2: Drug and Alcohol Related Fatalities, 2010-2014

APPROACH TO SAFETY

There are two components to efforts toward improving transportation safety: public education, and facility improvement. Federal, state and local agencies engage in efforts addressing both. In the area of education, programs go beyond safe-driver programs to provide information to pedestrians, children traveling to school and workers in traffic zones. Crash data show that driver error and the failure of bicyclist and pedestrians to obey the rules of the road are factors in most crashes, so traffic safety education can play a significant role in crash reduction. In addition, children, who are among the most vulnerable pedestrians, can be better protected through increasing their awareness of traffic hazards and safety rules. Education also includes law enforcement. ODOT research indicates a direct relationship between traffic law enforcement and crash rates. Due to funding shortfalls, however, the number of state police on the road has fluctuated but generally has remained below national average rates. Crash records show that two common infractions have a significant impact on traffic crash rates and severity: red-light running and speeding. These can be reduced through the consistent enforcement of safety-related traffic laws.

While the behavior of system users is critical, the facilities themselves need to be designed, built, maintained and operated in ways that make them safe. In the design and construction area, this means following standards for everything from lane widths and driveway spacing to sign placement and crosswalk location. Operations and maintenance programs look at where crashes occur and why, to determine whether any change on the ground could make accidents less likely. Visibility, for example, is important especially at intersections, to allow motorists a clear view of signs, cyclists, pedestrians, and other cars. Landscaping, which is used to improve appearances and conditions for neighbors and pedestrians, cannot be allowed to obstruct a clear line of sight when needed for traffic safety purposes.

Within the RVMPO area, safety programs are conducted at the state and jurisdiction level. Agencies track crash location and incident details and routinely draw on the expertise of both the emergency responders and public works staff to develop street improvements.

The RVMPO will continue to investigate better methods of tabulating and mapping highway crash data, and coordinate with jurisdictions to identify the most useful data. This ability will evolve as data sources improve. Feedback from jurisdictions and the public will help guide development of this on-going project.

RTP SAFETY PROJECTS

Virtually all the road projects listed in the RTP have a safety element. One of the most common types of improvement, urban upgrade, makes roads safer for motorists as well as bicyclists and pedestrians by adding sidewalks and bicycle lanes that are separate from motor traffic. Motor vehicle drivers also benefit from having marked lanes for non-motorized modes, marked crosswalks and signals. There is concern that the RVMPO not duplicate work already occurring at the local level, but instead find ways to enhance those efforts. Options for the RVMPO planning include:

- Using published sources, continue to develop tables, charts and maps of transportation crashes and incident data by mode.
- As resources and source agency databases allow, create Geographic Information Systems (GIS) –related database files and maps of accident and incident data by mode.
- Coordinate with appropriate lead agencies, with the primary focus being on reducing the frequency and severity of injury crashes.



- Continue Intelligent Transportation Systems planning and project programming, particularly with a view to investments that will enhance safety, which is described in Chapter 5.1, Transportation System Management.

- Continue reviewing with RVMPO committees and the public project evaluation matrix and other specific funding program scoring matrices to ensure that safety projects receive appropriate weighting and priority in plans and programs.
- Help jurisdictions identify additional transportation funding sources that are specifically targeted at safety projects to supplement the limited funds from conventional transportation sources.

The impacts of ignoring safety are significant. Beyond toll on families and communities is an economic cost. The National Safety Council published *Injury Facts, 2015 Edition*, which estimated an economic cost of nearly \$1.5 million for each traffic death, based on medical expenses and lost productivity. For each disabling injury the cost is about \$80,700. And for each incidence of property damage the cost is \$9,300 (including minor injury).

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