

SPEED MANAGEMENT ACTION PLAN

Implementation



U.S. Department of Transportation
Federal Highway Administration

The Oregon Experience



States across the Nation are experiencing increases in speeding-related fatalities.¹ In 2014, Oregon reported 105 speeding-related fatalities, which accounted for nearly 30 percent of total traffic fatalities in the State.² In an effort to take a broad look at their speeding-related policies, safety plans, and programs, the Oregon Department of Transportation (ODOT), with assistance from the Federal Highway Administration (FHWA), developed a [Speed Management Action Plan \(SMAP\)](#).³ The plan integrates opportunities for speed management statewide, suggests guidance for setting effective and appropriate speed limits, and promotes strategies and countermeasures to reduce speeding-related crashes.

Finalized in summer of 2016, ODOT promoted the SMAP to stakeholders by making presentations to:

- Regional metropolitan planning organizations
- Leadership teams within ODOT
- State safety committees
- Other teams within the agency

The presentations encouraged stakeholders to read the plan and to ask questions as a means of fostering involvement and collaboration. ODOT is currently working with several of these stakeholders to implement the plan's strategies and action steps, discussed below.

Incorporating SMAP into Other Safety Plans

OUTREACH AND EDUCATION TO LOCAL AGENCIES AND OTHER SAFETY PARTNERS

Oregon has increased its level of interaction with its transit partners in Portland and is collaborating with the agency to locate transit stops near crosswalks to help address speeding-related crashes involving pedestrians.

Speeding is a cross-cutting issue that effects all areas of safety. Having a SMAP enables other safety plan developers to pull language, ideas, and examples from the SMAP and incorporate it into their plan quickly and efficiently. During development of ODOT's Strategic Highway Safety Plan (SHSP) and the Bicycle and Pedestrian Plan, the developers recognized that appropriate vehicle speed is pivotal to improving safety outcomes among both motorized and non-motorized road users. Rather than developing new speeding-related strategies, ODOT was able to reuse recommendations and action items from the SMAP. The SMAP's strategies for improving practices for setting speed limits, designing for traffic calming, and increasing safety for non-motorized users was readily adopted in these two documents. This made ODOT's safety vision more cohesive and consistent with other agency and modal plans and ensured that speed management strategies geared towards specific focus groups were housed where they would be most useful.

¹ National Highway Traffic Safety Administration. (2018). "Traffic Safety Facts: Speeding – 2016 Data (March 2018 revised)." Report No. DOT HS 812 480. Washington, DC.

² National Highway Traffic Safety Administration. (2016). "Traffic Safety Facts: Speeding – 2014 Data." Report No. DOT HS 812 265. Washington, DC.

³ Federal Highway Administration, *Speed Management Action Plan - Oregon Department of Transportation*, FHWA-SA-15-017 (Washington, DC: FHWA, 2016), https://safety.fhwa.dot.gov/speedmgt/ref_mats/docs/oregon_speedmgt_plan.pdf.

Portland's Context-based Approach to Setting Speed Limits

Referenced in ODOT's SMAP is Portland's innovative pilot approach to setting speed limits. Prior to the formal development of the SMAP, the City of Portland, in conjunction with ODOT, began working to identify a new approach for recommending speed zones on city-owned collector streets based on their usage characteristics. In late 2016, after receiving the required approval to proceed from ODOT, the city began piloting an alternative approach to setting speed limits, commonly referred to as the "Portland Alternative." Using this approach, the city considers the context of the surrounding area when setting speed limits, including:

- Roadway usage patterns
- Number of pedestrians and bicyclists
- Existing facilities for non-motorized users
- Volume on roadways
- Crash rates and types
- Vehicle speeds

Portland's alternative approach to setting speed limits considers the context of the surrounding area.

Once the 4-year pilot is complete, the city will assess the overall safety impacts of the Portland Alternative. ODOT plans to assess the results, collaborate with the City of Portland on any potential changes, and work with other cities that may be interested in applying this approach.

Notably, the Portland Alternative pilot was selected by the National Cooperative Highway Research Program project NCHRP 17-76, "Guidance for the Setting of Speed Limits," which will identify and describe factors that influence operating speed and provide guidance to help agencies make informed decisions related to establishing speed limits on roadways.

Balancing User Needs

Oregon is a major west coast shipping hub, which causes State highways to experience a significant amount of commercial vehicle traffic. In urban areas, these highways pass through the hearts of cities where large commercial

vehicles must share the road with non-motorized users. ODOT recognizes that this mix of road users is a safety concern and is developing a new urban design chapter to add to the State's Roadway Design Manual. The chapter will focus on using design principles to achieve target speeds consistent with safety goals, context, users, and land use. The new chapter will provide guidance on how different treatments impact and influence speeds and the appropriate use of treatments and design criteria for different contexts. It will also include pedestrian crossing spacing guidance, bicycle facility selection criteria, and design approaches for achieving desired operating speeds. ODOT hopes the new chapter will help staff respond to speed limit adjustment requests from cities and help make Oregon's urban roads more pedestrian and bicycle friendly and safer for all users.

Improving Data

Oregon's SMAP contains a strategy to improve its collaboration and information sharing with law enforcement. Through its Traffic Records Coordinating Committee, Oregon funded a citation database that will provide speed citation data to help the agency identify locations likely to have speeding-related safety issues. This new database will complement the State's crash data; combined, they can be used to pinpoint locations where greater enforcement is needed and where safety countermeasures may be most effective.

The plan also includes a strategy to improve ODOT's roadway characteristic database by developing a database that links roadway IDs to speed limits. ODOT is working toward implementing this strategy by expanding its inventory of posted speed limits from State-owned highways only to all local agency-owned roads. An inventory of posted speed limits for every road in Oregon will improve ODOT's data analysis efforts and speed-management decision making.

In addition, ODOT is purchasing third-party vehicle speed data. This will allow them to monitor actual speeds on most of their roadway system, providing a larger coverage area over current automatic traffic recorders. ODOT plans to examine this data to help evaluate the impact of raising speed limits on crash frequency.

Focusing on Countermeasures

The SMAP includes several speed management countermeasures that have been proven to calm traffic and improve safety. Since the plan's development, ODOT has been expanding the use of these countermeasures.

Variable Speed Limit (VSL) Systems.

ODOT uses VSL to manage speeds in both rural and urban locations. These systems are used on urban arterials for access control during congested periods. The City of Portland uses VSL systems on several segments to control traffic, including on I-5 and I-405. On rural roads, VSLs are used to reduce speeds during severe weather. ODOT has proposed several new installations in mountainous rural areas and expects to see them installed within the next 2-3 years.

VSL Systems can Reduce Crashes by 29 percent

Source: CMF Clearinghouse, CMF ID 8730

Speed Warning Systems.

ODOT has expanded its use of speed warning systems, which provide information to motorists who are traveling at unsafe speeds for upcoming curves. These systems detect the speeds of vehicles as well as current weather conditions. During slippery conditions, the systems advise drivers to slow down if they are driving too fast for conditions.



Source: Getty Images

Roundabouts & Road Diets.

ODOT is expanding statewide acceptance and use of roundabouts and road diets, both of which have proven to reduce speeds and improve safety for both motorized and non-motorized road users. The agency is working closely with freight stakeholders to address concerns about commercial vehicle drivers' ability to navigate these configurations comfortably and safely. As part of the effort to add an urban design chapter in the State's Roadway Design Manual, ODOT is reviewing existing roundabout and road diet design guidance to determine if additional information regarding freight movement accommodations needs to be included.

Summary

Speed management is a multi-faceted issue that cuts across every area of safety. Oregon's SMAP includes strategies to improve their speed management guidance and policies as well as to identify locations for countermeasure implementation. ODOT is executing its strategies by:

- Evaluating and implementing a context-based approach to setting speed limits statewide
- Adding an urban design chapter to their State's Roadway Design Manual
- Developing a speed citation database
- Expanding its inventory of posted speed limits
- Using third-party data to better monitor driver speeds
- Expanding their use of proven traffic calming countermeasures

Over the next several years, ODOT will continue to execute these steps as well as start on others. They will also use their SMAP as a basis for driving speed management strategies and action steps into other safety plans.

Additional Resources

If your agency is interested in learning more about Speed Management Action Plans, visit the FHWA's Speed Management webpage (<https://safety.fhwa.dot.gov/speedmgt/>), which contains a variety of resources including a [SMAP template](#),⁴ [ODOT's SMAP](#),⁵ examples of SMAPs, noteworthy practices, speed management countermeasures, and much more.

For additional information on Oregon's efforts to reduce speeding-related crashes, please contact:

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⁴ FHWA. (2015). Speed Management Action Plan Template, FHWA-SA-15-017, Washington, DC. Available at: https://safety.fhwa.dot.gov/speedmgt/ref_mats/docs/fhwa_speedmanagementplantemplate_final.pdf.

⁵ Federal Highway Administration, Speed Management Action Plan - Oregon Department of Transportation, FHWA-SA-15-017 (Washington, DC: FHWA, 2016), https://safety.fhwa.dot.gov/speedmgt/ref_mats/docs/oregon_speedmgt_plan.pdf.