



## 2021 OREGON TSAP UPDATE

DATE: February 4, 2021

TO: Mary McGowan | Oregon DOT

FROM: Brian Chandler | DKS Associates

SUBJECT: **Final Performance Target Analysis Report**

Project #20020-004

### INTRODUCTION & PURPOSE

The Oregon Department of Transportation (ODOT) is conducting an update of the Transportation Safety Action Plan (TSAP). The TSAP unifies transportation safety planning in Oregon by providing long-term goals, policies, strategies, and near-term actions to eliminate deaths and life-changing injuries.

As part of the TSAP revision effort, ODOT and the DKS team are reviewing the State's Safety Performance Measures, including requirements under 23 USC 402 (various subsections) and 23 USC 148 (various subsections).

For this report, the DKS team reviewed the following Safety Performance Measure documentation:

- FHWA Safety Performance Measures website and associated outreach materials (e.g., fact sheets, FAQ, Final Rule, timeline)<sup>1</sup>
- 2016 Oregon TSAP
- Oregon 2018 State Highway Safety Report<sup>2</sup>

In addition, the team facilitated two discussions among relevant stakeholders about the current Safety Performance Measure Targets and recommendations for potential changes in the 2021 TSAP.

Following is a summary of the recommended approach for identifying targets and modifying the TSAP to best serve the needs of all stakeholders. It is organized as follows:

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<sup>1</sup> <https://safety.fhwa.dot.gov/hsip/spm/>

<sup>2</sup> <https://www.fhwa.dot.gov/tpm/reporting/state/safety.cfm?state=Oregon>

1. **Background.** Requirements and historical approach to Safety Performance Measure target setting and reporting
2. **Recommendation.** Recommended approach to set Safety Performance Measure targets and provide relevant information in the 2021 TSAP.
3. **Process Documentation.** Record of the discussions held in 2020 and 2021 that led to the recommended approach.

## BACKGROUND: REQUIREMENTS AND HISTORICAL APPROACH

Following are the basics of Safety Performance Measures, Targets, and application of the Final Rule in Oregon.

### FHWA SAFETY PERFORMANCE MEASUREMENT

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Safety Performance Management is part of the overall Transportation Performance Management program, which FHWA defines as a strategic approach that uses system information to make investment and policy decision to achieve national performance goals. The Safety Performance Management Final Rule identified five safety performance measures that each State must develop annual targets for (based on 5-year averages):

1. **Number of Fatalities:** The total number of persons suffering fatal injuries in a motor vehicle crash during a calendar year.
2. **Rate of Fatalities:** The ratio of total number of fatalities to the number of vehicle miles traveled (VMT, in 100 Million VMT) in a calendar year.
3. **Number of Serious Injuries:** The total number of persons suffering at least one serious injury in a motor vehicle crash during a calendar year.
4. **Rate of Serious Injuries:** The ratio of total number of serious injuries to the number of VMT (in 100 Million VMT) in a calendar year.
5. **Number of Non-motorized Fatalities and Non-motorized Serious Injuries:** The combined total number of non-motorized fatalities and non-motorized serious injuries involving a motor vehicle during a calendar year.

States must establish a target each year and coordinate among the primary safety planning processes: Highway Safety Improvement Program (HSIP), Highway Safety Plan (HSP), and the Strategic Highway Safety Plan (SHSP) (i.e., Oregon's Transportation Safety Action Plan (TSAP)). Beyond the State DOT, Metropolitan Planning Organizations (MPOs) must establish targets. Each MPO may choose to support the State target or establish their own specific numeric targets.

### 2016 TSAP PERFORMANCE MEASURES AND TARGETS

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The 2016 Oregon TSAP includes detailed information about Safety Performance Measures and Targets in two different locations. First, the Executive Summary includes a table with annual targets on page 6 of the plan.

**TABLE 1. TSAP PERFORMANCE TARGETS, FIVE-YEAR ROLLING AVERAGES**

(SOURCE: 2016 OREGON TSAP, TABLE ES.1)

Base Period	Fatalities (2011-2015)	Fatality Rate (2011-2015)	Serious Injury (2010-2014)	Serious Injury Rate (2010-2014)	Nonmotorized Fatalities and Serious Injuries (2010-2014)
Baseline	357	1.04	1,491	4.42	234
2013-2017	357	0.94	1,491	4.42	234
2014-2018 <sup>a</sup>	350	0.89	1,461	4.33	229
2015-2019	343	0.83	1,432	4.24	225
2016-2020	328	0.78	1,368	4.06	215
2017-2021	306	0.73	1,274	3.78	200

<sup>a</sup> 2014-2018 is the first period that targets must be established for the HSIP Program.

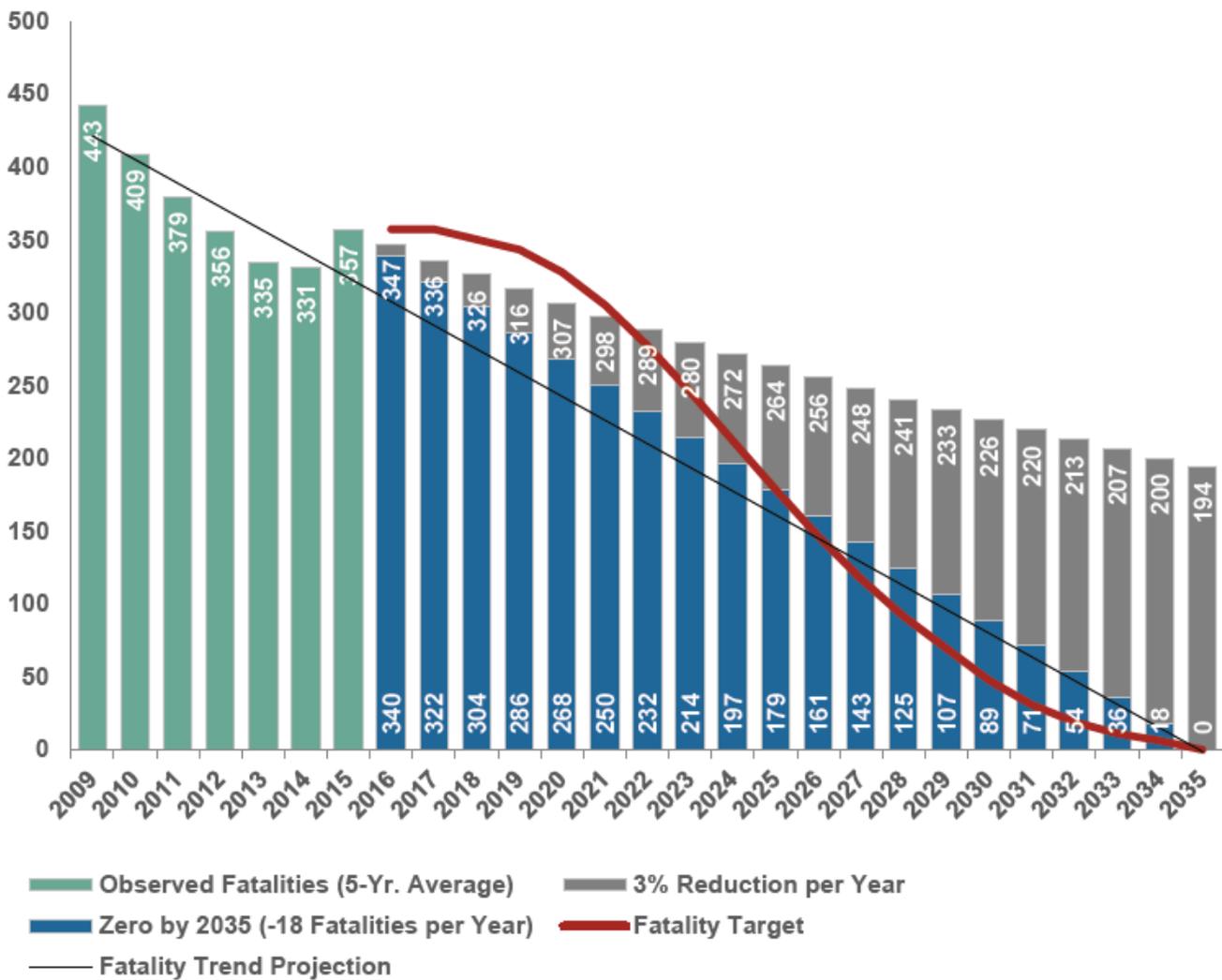
In Chapter 7, *Performance Measures and Targets*, the TSAP details the performance measures used and their requirements, including those from FHWA and NHTSA. These include the following:

- **FHWA Final Rule on National Performance Measures.** Number of Fatalities, Rate of Fatalities, Number of Serious Injuries, Rate of Serious Injuries, and Number of Non-motorized Fatalities and Non-motorized Serious Injuries.
- **MAP-21 Special Rules.** Rural Road Fatality Rate, Older (65+ years old) Driver and Older Pedestrian Rate of Fatalities, Older Driver and Older Pedestrian Rate of Serious Injuries.
- **Oregon Traffic Safety Performance Plan NHTSA Performance Measures**
  - Fatalities
  - Serious Traffic Injuries
  - Fatalities/100M VMT
  - Rural Road Fatalities/100M VMT
  - Urban Road Fatalities/100M VMT
  - Unrestrained Passenger Vehicle Occupant Fatalities, All Seat Positions
  - Alcohol Impaired Driving Fatalities Involving a Driver or Motorcycle Operator with a BAC of 0.08 and Above
  - Speed-related Fatalities
  - Motorcyclist Fatalities
  - Unhelmeted Motorcyclist Fatalities
  - Drivers Age 20 or Younger in Fatal Crashes
  - Pedestrian Fatalities
  - Bicyclist Fatalities
  - Statewide Observed Seat Belt Use, Passenger Vehicles, Front Seat Outboard Occupants

The TSAP continues to describe several methodologies the State considered for required annual target setting for the FHWA Final Rule Performance Measures:

- Straight-line to zero by 2035
- 3-percent reduction per year
- Trend-line
- S-Curve

The figure below illustrates an example of these methods for the first performance measure, Number of Fatalities.



**FIGURE 1. HISTORICAL AND OPTIONAL FORECAST FATALITY TRENDS, 2009-2035, FIVE-YEAR-AVERAGE**

(SOURCE: 2016 OREGON TSAP, FIGURE 7.1)

Analyzing each option, Oregon safety leadership decided to set targets based on the S-Curve forecast trend for all five performance measures. Details for each performance measure are available in the 2016 Oregon TSAP, page 103 and following.

## 2018 OREGON STATE HIGHWAY SAFETY REPORT

Progress toward the established targets was calculated in the *State Highway Safety Report (2018) – Oregon*, published by FHWA.<sup>3</sup> Following are the 2014-2018 five-year average targets and outcomes for each performance measure.

**TABLE 2. OREGON SAFETY PERFORMANCE TARGET ASSESSMENT SUMMARY**

PERFORMANCE MEASURE	2014-2018 TARGET (AVG)	2014-2018 OUTCOME (AVG)	MET OR MADE SIGNIFICANT PROGRESS?
NUMBER OF FATALITIES	350	449.2	No
RATE OF FATALITIES	0.89	1.116	No
NUMBER OF SERIOUS INJURIES	1,461	1,655.8	No
RATE OF SERIOUS INJURIES	4.30	4.742	No
NUMBER OF NON-MOTORIZED FATALITIES AND SERIOUS INJURIES	229	252.8	No

Based on the results of the assessment—not meeting or making significant progress toward each target—the State of Oregon is required to take the following actions:

- Use obligation authority equal to the HSIP apportionment for the fiscal year prior to the target year only for HSIP projects (compared to the flexibility offered to use HSIP for other transportation needs under certain conditions).
- Submit an annual implementation plan that describes actions the State DOT will take to meet their targets.

<sup>3</sup> <https://www.fhwa.dot.gov/tpm/reporting/state/safety.cfm?state=Oregon>

## RECOMMENDED APPROACH: TARGET SETTING IN THE 2021 TSAP

The recommended approach for future safety performance target setting and inclusion in the 2021 TSAP must maintain adherence to federal requirements, support internal program implementation, establish accountability and transparency, and provide an ability for modification sooner than the next SHSP update. The approach is based on the following:

- Federal Transportation Performance Management program requirements
- Previous performance against targets developed in 2016
- Stakeholder discussions in November 2020 and January 2021

## TARGET-SETTING RECOMMENDATIONS

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- **Zero Vision.** Keep the existing vision of zero fatalities and serious injuries by 2035. This interim update to the TSAP did not scope revisions to the vision; therefore, it is out of scope to revise.
- **S-Curve Method.** Keep the previously-used “S-curve” to identify the near-term and long-term path to zero by 2035.
- **Revise Targets Annually.** Add an annual Safety Performance Measure target setting review that includes the OTSC. Steps will include reviewing the most recent crash data, assessing progress achieved, anticipating future safety trends, and adjusting targets for the next year.
  - Integrate into the annual HSP and HSIP annual reports.
  - Include the MPOs in the annual target setting exercise, at their discretion, per the Safety Performance Measure requirements.

## INCLUDING TARGET-SETTING CONTENT IN THE 2021 TSAP

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- **Displaying Information.** Do not include 5-year rolling averages for multi-year targets (e.g., Table 1 of the 2016 TSAP). Instead, provide a baseline (2014-2018) and a 5-year target (2019-2023) set by the “S-Curve Method” used in the 2016 TSAP.
  - Note: The 2019-2023 targets may change during the lifespan of the 2021 TSAP (typically 5 years), so a contingency should be made to address this change before the 2026 TSAP is developed.

### STAKEHOLDER DISCUSSION #1: NOVEMBER 17, 2020

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DKS facilitated a Performance Target Analysis Meeting on November 17, 2020, to review Oregon's State Safety Targets methodology, analyze status of meeting those targets, evaluate the need for changes, discuss a procedure for setting new targets, and determine how all relevant information would be included in the 2021 TSAP. The following individuals participated in the online meeting:

- Andrew Eno, FMCSA
- Angela Kargel, ODOT
- Beth Wemple, HDR
- Jess Brown, ODOT
- Chris Doty, Deschutes County
- Chris Wright, ODOT
- Christi McDaniel-Wilson, ODOT
- Colleen O'Hogan, ODOT
- Doug Bish, ODOT
- Erik Havig, ODOT
- Greg Fredericksen, NHTSA
- Jonathan Wilson, FMCSA
- Marie Dodds, AAA
- Mary McGowan, ODOT
- Mike Jaffe, SKATS
- Nick Fortey, FHWA
- Philip "PK" Kase, ODOT
- Michael Rock, ODOT
- Scott Kocher, Oregon Walks
- Traci Pearl, ODOT
- Troy Costales, ODOT
- Walt McAllister, ODOT
- Brian Chandler, DKS
- Lacy Brown, DKS

DKS introduced the history of Safety Performance Measures with a focus on the FHWA Final Rule.

**Target-setting in Oregon and its Ramifications.** ODOT Traffic Safety Division (TSD) provided background on the process conducted in 2015-2016 to develop the targets and described their office's experience with those targets over the past few years. Establishing and publishing these multi-year targets in the TSAP created conflicts between these publicly-shared targets and the annual goals established in other safety planning documents.

For example, NHTSA requires State agencies to use the past 5 years of data to make plans for the following year's Highway Safety Plan (HSP). However, the 2016 TSAP had already established targets for the following year. These numbers conflicted, so ODOT TSD chose to provide both sets of numbers: TSAP targets and the historical data.

TSD initially recommended a new approach for the 2021 TSAP focused less on sharing specific numbers for future years, and more on the process of establishing targets. This method may include one or more of the following elements:

- Identify a process, who needs to develop and refine the process over time, and how it should be established.
- Consider annual updates of the forecasted target values instead of producing multiple years right now.
- Do not replicate Table ES.1 (from the 2016 TSAP) in the 2021 TSAP.

**Accountability of Targets.** Other meeting participants expressed concern about removing the multi-year targets and encouraged the need for Oregon’s safety leadership—and all safety stakeholders—to be held accountable for safety outcomes.

- If we have failed to reduce the number and severity of transportation crashes, removing the numbers in the TSAP next time seems like an odd response. Should we instead redouble our efforts to establish and meet new targets?
- TSD responded with agreement and focused on the recommendation to revise Safety Performance Measure Targets more frequently than every 5 years.

DKS team staff asked the group to consider a hybrid approach that incorporates an annual conversation while also providing numerical goals in the TSAP. For example, other State safety plans include updates of crash data outcomes and attributes each year as a supplement to the primary content.

**Level of Effort to Re-establish Targets.** ODOT Planning staff asked about the requirements of the Final Rule related to coordination and consultation. Safety leadership could be signing up for a detailed process every year that includes stakeholder outreach, public comments, and executive-level approval from State and Federal officials.

- TSD offered that this consultation would be both a work element and an opportunity or more regular discussion of Safety among stakeholders. The numerical targets Oregon safety leadership established for the 2016 TSAP were not revisited until now. In the interim, stakeholder have developed action plans and conducted safety-related activities, but the entire group has not convened to address emerging needs until now.
- Could safety strategies and activities change more often with annual check-ins, data analysis, and changes to targets?
  - Yes, some programs can be responsive to annual changes.
  - Others cannot change as quickly (e.g., ARTS is programming for 2027 projects this winter).

DKS team staff suggested that target setting and regular convening of stakeholders are not both required for one of them to occur. If getting stakeholders together more often is desired, then that need can be met in several ways.

**MPO Experience.** The Salem/Kaiser MPO shared their approach in 2015 that included reviewing their local data and then deciding to support the State’s targets. Due to the MPO’s relatively small size, high-level data like fatalities (fewer than 20 per year) and fatality rate are difficult to analyze year-to-year. However, being involved in the Safety discussion only every 5 years does not seem like enough.

## ODOT INTERNAL DISCUSSION: DECEMBER 18, 2020

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ODOT staff conducted a follow-up meeting to review the stakeholder discussions and draft report, and to develop recommendations for the stakeholders. ODOT recommends the following objective and approach for safety performance measurement and target setting.

The objectives for establishing PM and targets process should include the following.

- Define a process that supports internal program implementation.
- Establish accountability and transparency.
- Identify and leverage other groups/processes that we could integrate the TSAP performance measures and target setting processes into.

ODOT staff recommend the following approach.

- Keep the existing vision of zero fatalities and serious injuries by 2035. This interim update to the TSAP did not scope revisions to the vision; therefore, it is out of scope to revise.
- Do not include 5-year rolling averages for multi-year targets (e.g., Table 1 of the 2021 TSAP). Instead, provide a baseline and a 5-year target (2026) set by the “S-Curve approach” used in the 2016 TSAP.
- Add an annual Safety Performance Measure target setting approach that will go to the OTSC. Steps will include reviewing the most recent crash data, assessing progress achieved, and setting new targets for the next year.
  - Integrate into the annual HSP process, which includes submitting to the OTSC in May (beginning May 2022). Review of the data results in ODOT Transportation Safety Division program adjustments.
  - Include the MPOs in the annual target setting exercise, at their discretion, per the Safety Performance Measure requirements.

## STAKEHOLDER DISCUSSION #2: JANUARY 19, 2021

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ODOT reconvened the November stakeholder participants for a second Performance Target Analysis Meeting on November 17, 2020, to present ODOT's recommended approach to target setting, annual updates, and inclusion in the 2021 TSAP. DKS facilitated this online meeting, and the following individuals participated:

- Beth Wemple, HDR
- Jess Brown, ODOT
- Chris Wright, ODOT
- Christi McDaniel-Wilson, ODOT
- Colleen O'Hogan, ODOT
- Doug Bish, ODOT
- Erik Havig, ODOT
- Mary McGowan, ODOT
- Mike Jaffe, SKATS
- Nick Fortey, FHWA
- Philip "PK" Kase, ODOT
- Michael Rock, ODOT
- Ryan Klitzsch, Cambridge Systematics
- Scott Kocher, Oregon Walks
- Traci Pearl, ODOT
- Troy Costales, ODOT
- Walt McAllister, ODOT
- Brian Chandler, DKS
- Lacy Brown, DKS

DKS introduced ODOT's proposed approach to the 2035 zero vision, Safety Performance Measure target setting, the annual review process, and what to include in the 2021 TSAP related to targets.

**Reporting Timelines.** Each year the Highway Safety Plan (HSP) update is due July 1 (for activities starting October 1 of that same year), and the Highway Safety Improvement Program (HSIP) report is due August 31. Each includes information related to performance measures and targets, so it will be important to coordinate these efforts with any new annual target setting process.

**Beyond Reporting – the Bigger Picture.** Scott Kocher shared a concern that an annual process of reviewing the most recent data and changing targets to match reduces our accountability to reduce traffic fatalities and serious injuries. Adding more paperwork to the process by updating targets annually could shift focus from actually reducing transportation fatalities (the actual work) to debating performance measure details each year. Why would we change numbers year-to-year to make our goals less ambitious?

Michael Rock expressed appreciation for Scott's comments and confirmed that we are not suggesting less discussion of real safety issues and actions. We want to review the federal requirements annually, not just as ODOT staff but as a more public discussion, to determine our current status and the best next steps moving forward.

### **Additional Discussion**

- Scott Kocher: This open discussion about needs and potential solutions can occur annually with the OTSC without tying it to federal performance measures or target setting.
- Mary McGowan: Raising the performance measure targets to OTSC's attention each year can add accountability.
- Traci Pearl: OTSC is informed monthly of activities by TSD, and safety partners are included in TSD's HSP update process each year. We need to be careful about adding work to OTSC's plate.
- Nick Fortey: FHWA provides general requirements, but ODOT and its partners are able to determine the process and mechanics for target setting.
- Troy Costales: The HSP Annual Report only deals with NHTSA programs, not all of ODOT's safety efforts. The safety numbers are for ALL of Oregon, beyond TSD and beyond ODOT. We must be a community together.
- Walt McAllister: The TSAP is primarily an "influence" document (versus a "power" document).
- Scott Kocher: One influence the document can have is to set expectations for the future. The 2016 goals were not aggressive or extreme, and we failed to meet them. We need to sound the alarm and change what we are doing. Instead, we may water down the performance targets in response to past failure to meet expectations.