INVEST
ECONOMIC • SOCIAL • ENVIRONMENTAL

TOTAL SCORE
13/15

Criterion Example:

Arizona Department of Transportation Sustainable Transportation Program

Arizona

Module: Operations & Maintenance (INVEST Version 1.2)
Criterion: OM-05 Safety Management (1-15 points)
Lead Agency: Arizona Department of Transportation (ADOT)
Link: https://www.azdot.gov/business/environmental-planning/programs/sustainable-transportation-program
Sources: https://www.sustainablehighways.org/779/78/arizona-dot-using-invest-to-benefit-planning-programming-and-maintenance-in-arizona.html

Description: ADOT used INVEST 1.2 to review its current safety management operations and maintenance activities and determine how well it is maximizing the safety of its existing roadways. ADOT compared its current safety management practices to the best practices included in the Safety Management criterion (OM-05) and used any deficiencies identified to determine methods of improvement, where needed.

Scoring Details:

OM-05.1: Assess Current Safety Performance (4/4)

- **OM-05.1a: Evaluate Safety Performance (2/2)**
    - ADOT scored full points in this area as its Strategic Highway Safety Plan (SHSP) evaluates the safety performance of its highways across 12 different types of crashes. The crash evaluations include those caused by driver behavior, such as the number of unbelted crashes.
- **OM-05.1b: Identify Safety Performance Metrics (2/2)**
    - ADOT also scored full points in identifying safety performance metrics. ADOT collects safety performance data for various metrics for each type of crash identified in its SHSP. ADOT also collects data for metrics related to the behavioral aspects of crashes.

OM-05.2: Set Goals and Targets (3/3)

- **OM-05.2a: Set Safety Goals (2/2)**
    - ADOT received two out of two total points for setting safety goals. ADOT's SHSP sets intermediate- and long-term goals with respect to safety. To ensure that these goals are

achievable and effective, ADOT uses individual teams to set targets for each safety category.

- **OM-05.2b: Integrate Safety Goals with Maintenance and Operations (1/1)**
    - Scoring one point in this sub-criterion, ADOT successfully integrates its safety goals into current maintenance and operations activities. Building on this integration, safety goals are also incorporated into ADOT's new planning-to-programming (P2P) initiative.

OM-05.3: Develop a Plan (2/2)

- **OM-05.3a: Develop a Statewide or Regional Safety Plan (1/1)**
    - ADOT's SHSP is its statewide plan for safety, earning it full points in this area. Per federal regulations, ADOT developed this data-driven, multi-year plan in August 2014 as a comprehensive framework to reduce fatalities and serious injuries on the statewide road network. The strategies and action steps laid out in the plan provide state, local, and federal stakeholders a clear path forward to improve safety on Arizona's public roadways. The previous SHSP, developed in 2007, established a long-term vision to reach zero fatalities by 2050 and included a short-term goal to reduce the number of fatalities from 2007 numbers by 15 percent in the following five years. ADOT exceeded the fatality reduction targets in that plan. In the 2014 SHSP, ADOT built upon its previous direct transportation investments to further reduce the number of crashes within the state.
- **OM-05.3b: Include Strategies and Activities to Support Improvement of Data and Analysis (1/1)**
    - The SHSP also earned ADOT full points in this sub-criterion, as the plan stresses the importance of data management and analysis. In addition, one element of the SHSP is improving data collection and analysis. To enhance its current data management and analysis practices, ADOT is working to integrate its safety data into a Geographic Information System (GIS) format. The agency is also using an application called Safety Analyst to integrate and manage safety data on one platform.

OM-05.4: Implement the Plan (3/3)

ADOT scored all available points for OM-05.4 as the agency implements its SHSP in an integrated and multidisciplinary manner. ADOT addresses all of the criterion's required elements related to implementation by incorporating proactive and reactive approaches to fatal and serious injury reduction.

OM-05.5: Measure Progress and Monitor Performance (1/3)

ADOT scored one out of three points for OM-05.5 because it uses the tool Safety Analyst to measure progress and monitor performance, but not on a statewide basis. In the future, ADOT hopes to expand the use of the tool to measure progress and monitor safety performance across the state.

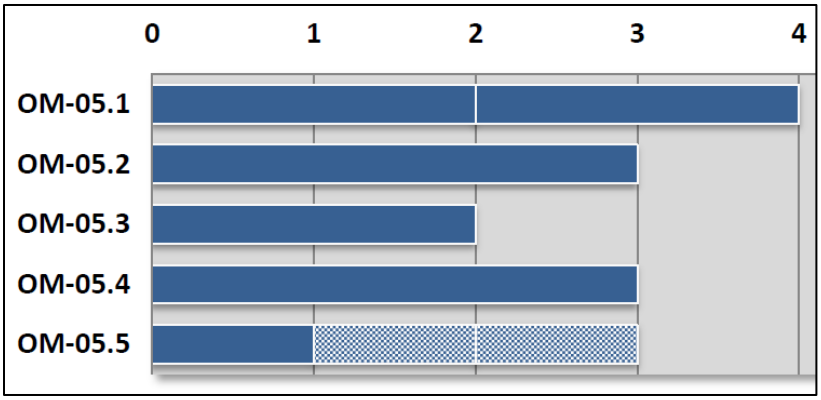

Figure 1. Chart showing ADOT OM-05 scoring (the light blue shading indicates total available points for OM-05.5. ADOT only scored one out of three points for this subrequirement).

Sustainability Improvements:

As Figure 1 above displays, ADOT achieved a nearly perfect score for the OM-05 criterion and continues to strengthen its performance even in the sub-criteria where it earned full points. For example, using state crash data filtered into safety metrics, ADOT discovered that the majority of its crashes occur on rural two-lane highways and can be categorized as run-off-roadway crashes. To evaluate how crashes of this type can be reduced in the future, ADOT's Traffic Safety Section focused on one 25 mile corridor on Arizona State Road (SR) 264 from Burnside Junction to Summit in Northern Arizona. In the study, which is described in a case study developed by ADOT and published as Publication No. FHWA- HIF-15-014, ADOT used Performance-Based Practical Design to modify the traditional design approach of the corridor (i.e., the shoulder width and project segmentation). Performance-Based Practical Design is a decision making approach that helps agencies better manage transportation investments and serve system-level needs and performance priorities with limited resources.

In the future, ADOT plans to make improvements to its efforts to measure progress and monitor performance by expanding its current efforts statewide. This, on top of the myriad of other strategies ADOT is employing, will assist the agency in improving the sustainability of its already successful safety management practices.