

This topic is “practice ready.”  Yes  No

## Measuring Winter Maintenance Operations Performance

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### Abstract

Measuring performance is recognized as an important part of a public transportation agency’s mission. Assessment of agencies’ performance helps to continuously improve services, strengthen accountability, communicate results of programs and services, and provide better information for effective decision making, including decisions about resource allocation. The objective of this research is to identify the most important performance measures that state departments of transportation are implementing, measure their effectiveness, and determine the impacts of weather variables (e.g., snow, temperature, wind) on winter maintenance operations (e.g., pre-treatment, plowing). The researchers collected data on the performance of winter maintenance operations and weather factors affecting that performance from thirty-one state DOTs in the United States. The research findings exhibited the most significant weather variables that impact roadway maintenance operations and the most common metric for measuring the performance of agencies. This research also led to development of a quantitative evaluation index method that considers weather conditions, maintenance efforts undertaken for a given storm, resulting road conditions, and interactions among these factors. Based on the data analysis, the researchers also provide several recommendations that help transportation agencies improve their winter maintenance operations.

**Keywords: Weather Variables, Maintenance Operations, Operations Performance, Performance Measure**

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