

Dust Suppression by Incorporating Reclaimed Asphalt Pavement (RAP) Into Gravel Roads' Surfacing

Topic 3. Soil Stabilization

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Abstract

This project stems from the common practice by the Wyoming Department of Transportation (WYDOT) of giving reclaimed asphalt pavement (RAP) to various counties and municipalities around the State of Wyoming. Recently, the State legislature appropriated \$3,000,000 to compensate WYDOT for RAP given to the counties. It is generally believed that incorporating RAP into gravel roads' surfacing aggregate reduces dust emanation. This reduction should reduce the probability that counties find themselves in violation of air quality standards for particulate matter smaller than 10 μm (PM-10).

As part of this study, test sections are being constructed; they are scheduled to be completed in April 2008. The test sections will include variable percentages of RAP in addition to a control section without any RAP. Laboratory testing will be performed on samples obtained from all test section. The lab testing will include gradations, PL, LL, R-value, and aggregate angularity.

The test sections will be monitored during the summer of 2008 by conducting condition surveys. In addition, dust will be measured using the CSU dustometer. Additional relevant information will be collected on traffic, weather, and maintenance activities. Cost benefit analysis will be performed at the end of the study to determine the effectiveness of RAP in gravel roads.

This paper will describe in detail the construction of the test sections, all field and lab test results including dust measurements, and the benefit/cost analysis of utilizing RAP in gravel roads.