



UNIVERSITY TRANSPORTATION CENTER RESEARCH BRIEF

PROJECT TITLE: Transportation Corridor Resiliency in the Face of a Changing Climate

PRINCIPAL INVESTIGATOR: Keith Cunningham (UAF), Michael Olsen, Ben Leshchinsky (OSU), Joseph Wartman (UW)

INSTITUTION: MULTI-INSTITUTION PROJECT

ESTIMATED COMPLETION DATE: JANUARY 2018

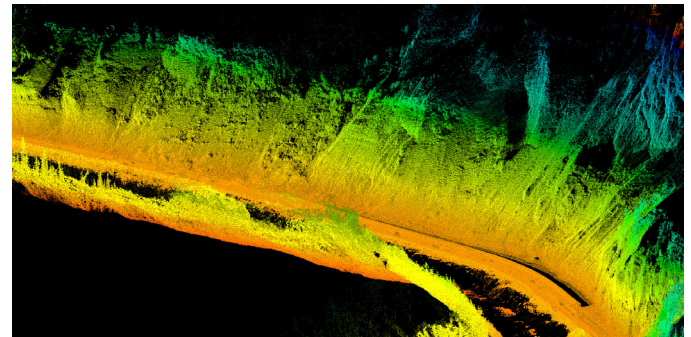
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Background

In 2015, President Obama's administration issued the Office of Management and Budget's Circular A-11, which directs Federal agencies—including transportation agencies—to consider climate preparedness and resilience as part of their FY

2017 construction and maintenance budget requests. The effects of a changing climate on transportation corridor slopes is poorly understood, but several recent studies suggest that landslide activity, especially rockfall, is likely to increase as a consequence of increased occurrence of intense precipitation events. This work will be a necessary first step in providing the tools to accomplishing the OMB's Circular A-11's directive.



Research Project

Since 2012, we have been acquiring high-resolution lidar surveys of close to 20 rock-slopes in Alaska in support of Pactrans-supported studies of roadway safety. In this project, we will capitalize on this treasure trove of unique data to quantify how rockfall activity (magnitude-frequency of rockfall events) varies with changes in annual storm intensity from 2012 to 2016. We will then use this information to in conjunction with a landslide activity forecasting procedure we developed to investigate how the resiliency of transportation corridor may change in the future.

