

UTC Project Information	
Project Title	Elucidating snow heights for avalanche assessment from automated data processing from UAS and new winter hazards station
University	University of Alaska
Principal Investigator	Billy Connor
PI Contact Information	bgconnor@alaska.edu
Funding Source(s) and Amounts Provided (by each agency or organization)	University of Washington PacTrans \$60,000 University of Alaska \$ 60,000
Total Project Cost	\$120,000
Agency ID or Contract Number	69A3551747110
Start and End Dates	June 16, 2021-June 15, 2022
Brief Description of Research Project	<p>Our focus is on Atigun Pass, where the Dalton Highway crosses the Brooks Range, the most northern mountain range in the North America Continent, and well above the Arctic Circle. Atigun Pass is a unique environment because blowing snow is the principal factor in creating avalanche conditions. Blowing snow at the pass also generates snowdrifts that block the road, occasionally occupying the small M&O crew for days on end.</p> <p>The redistribution of snow by blowing snow is a significant force in creating avalanche conditions and generating snowdrifts on the Atigun Pass Road. We aim to create two new tools to optimize the effort in keeping the road free of snow. The first tool applies UAS (unmanned aircraft system) in conjunction with in-house developed software to elucidate snow surface height (digital elevation models). The software will keep track of hazardous snow features such as a hanging cornice or how much snow loaded is in a gully above a road. The second tool is a new Winter Hazard Station (WHZ). We placed the WHZ near the pass, close to the brunt of peak wind conditions—the WHZ measures; local meteorological conditions, direct blowing snow, and sampling through delayed-camera views.</p>

<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p>	
<p>Impacts/Benefits of Implementation (actual, or anticipated)</p>	
<p>Web Links</p> <ul style="list-style-type: none">• Reports• Project Website	