UTC Project Information	
Project Title	Mitigating wildfire impacts on mobility using GIS, fire simulation, and operations modeling.
University	Oregon State University
Principal Investigator	Joe Louis
PI Contact Information	Joseph.Louis@oregonstate.edu
Funding Source(s) and Amounts Provided (by each agency or organization)	University of Washington PacTrans $40,00 Oregon State University $ 40,000
Total Project Cost	$80,000
Agency ID or Contract Number	69A3551747110
Start and End Dates	March 16, 2021-March 15, 2022
Brief Description of Research Project	This research will pursue the following four tasks to enhance the understanding of the impact of wildfires on Oregon's transportation network: Task 1: Wildfire simulation to identify areas of damage: A dynamic fire simulation tool called Wildfire Analyst, integrated into ArcGIS software, will be used to create realistic simulations of wildfire spread through Oregon's forest under changing environmental conditions. Task 2: Debris spread and other damage estimation: The wildfire simulation combined with current vegetative cover in the forest will be used to estimate the amount of debris created as well as the damage to transportation infrastructure. Task 3: Quantification of road clearance/travel times based on equipment availability: A discrete event simulation-based framework will be used to determine productivity and recovery times for affected areas based on equipment availability and the extent of the damage. Task 4: Equipment allocation prioritization to minimize road clearance times: The recovery times and damage estimates will be used in the AnyLogic simulation software, also integrated into ArcGIS software that is commonly used by transportation agencies, to enable decision makers to perform what-if scenarios.

Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	
Impacts/Benefits of Implementation (actual, or anticipated)	
Web Links • Reports • Project Website	