

Successful Approaches for the Use of Unmanned Aerial Systems by Surface Transportation Agencies

PROJECT TITLE

Successful Approaches for the Use of Unmanned Aerial Systems by Surface Transportation Agencies

STUDY TIMELINE

June 2020 – December 2021

INVESTIGATORS

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More information about the VTrans Research Program, including additional Fact Sheets, can be found at:
<http://vtrans.vermont.gov/planning/research>

Problem Statement

Unmanned Aerial Systems (UAS) have the potential to revolutionize DOT operations. UAS-based bridge inspections can be made safer and less costly by reducing the need to put a person in a dangerous position. Right-of-way (ROW) surveys can take place in hours as opposed to days. Traffic monitoring using UAS provides a unique perspective that would be cost-prohibitive using traditional aircraft. Aerial surveys of construction sites can be used to confirm contractors are meeting timelines and are adhering to environmental regulations. Search and rescue missions can happen more rapidly and at a lower cost, directing rescue teams to persons in need of assistance. As with any new technology, integrating UAS into operations poses challenges related to human resources, policies, procedures, and information technology.



Methodology

This project will implement a pilot training program for members of the Vermont Agency of Transportation (VTrans), Vermont Department of Public Safety (VT DPS), Maine Department of Transportation (MaineDOT), Massachusetts Department of Transportation (MassDOT), and the New Hampshire Department of Transportation (NHDOT).

Next Steps

Workshop sessions with participants will be conducted with focuses on safety & risk management, flying UAS in proximity to structures for inspections, UAS night operations, and collection and analysis of thermal imagery.

Potential Impacts and VTrans Benefits

The training provided in this project will aid VTrans and other regional DOT agencies in reducing UAS operational liability, maximize the UAS potential uses, enable DOT staff to perform UAS operations at a higher level more resourcefully, and shorten the response time for UAS-developed deliverables.