

2018 Research Symposium

Improvement and Operation of the Vermont Travel Model

& STIC Annual Meeting

RESEARCH PROJECT TITLE

Improvement and Operation of the Vermont Travel Model

STUDY TIMELINE

October 2017 – September 2018

INVESTIGATORS

Jim Sullivan, UVM TRC, PI

VTRANS CONTACTS

Costa Pappis, Transportation Planning Coordinator

Joe Segale, Policy, Planning, and Research Director

This fact sheet was prepared for the 2018 VTrans Research and Innovation Symposium & STIC Annual Meeting held at the State House in Montpelier, VT, on **September 12, 2018** from **8:00 am– 1:00 pm**.

Fact sheets can be found for additional projects featured at the 2018 Symposium at

<http://vtrans.vermont.gov/planning/research/2018symposium>

Additional information about the **VTrans Research Program** can be found at

<http://vtrans.vermont.gov/planning/research>

Additional information about the **VTrans STIC Program** can be found at <http://vtrans.vermont.gov/boards-councils/stic>

Introduction

For two decades, the Vermont Agency of Transportation's Division of Policy, Planning, and Intermodal Development has been using a statewide travel-demand model to address key traffic, regional travel, and policy questions for a variety of stakeholders. The Model is an important planning tool beneficial not only to the Agency of Transportation, but also to regional planning commissions and the University of Vermont Transportation Research Center – all of which rely on the model for transportation planning and research activities.

Methodology

The basic Model functionality, accuracy, and effectiveness are continually improved, all within its base-year of 2009-2010. As new data sources become available and new uses for the Model are required, these improvements become critical. This project also includes the operation of the Model for analyzing scenarios and delivering outputs related to traffic and travel policy issues faced by VTrans.

Next Steps

The Model is currently being updated and improved to better serve the Agency's needs for resilience modeling and analysis. The Model code is being updated and the road network is being modified to support transportation-system resilience planning by incorporating link vulnerability scores, the all-roads network, the sub-area model procedure, and the criticality measurement from the "Methods and Tools" project. Model applications conducted this year have included:

- October 2017 Construction Impact Measurement
- I-89 Table-Top Exercise Impact Measurement
- VT 22A By-Pass Scenario Analysis

Potential Impacts and VTrans Benefits

The UVM TRC is completing its 10th year of hosting, maintaining, and improving the Vermont Travel Model. Throughout that time, the uses of the Model have increased, with approximately 6 requests for support per year, from the Maintenance and Operations Bureau, the Construction and Materials Bureau, and the Policy, Planning and Research Bureau.