

<b>UTC Project Information – Project #C5.2018</b>	
Project Title	Leveraging High-Resolution LiDAR and Stream Geomorphic Assessment Datasets to Expand Regional Hydraulic Geometry Curves for Vermont: A Blueprint for New England States
University	University of Vermont
Principal Investigator	Kristen L. Underwood, PhD, Research Assistant Professor
PI Contact Information	Kristen.Underwood@uvm.edu, Dept. of Civil & Environmental Engineering, 33 Colchester Ave., Burlington, VT, 802-656-4571
Co-PI(s)	Arne Bomblies, Donna Rizzo
Co-PI Contact Information	Arne.Bomblies@uvm.edu, Donna.Rizzo@uvm.edu, Dept. of Civil & Environmental Engineering, 33 Colchester Ave., Burlington, VT
Funding Source(s) and Amounts Provided (by each agency or organization)	US DOT through UTC TIDC (federal): \$73,122 University of Vermont (match): \$73,122
Total Project Cost	\$146,244
Agency ID or Contract Number	69A3551847101
Start and End Dates	6/1/2019 – 1/14/2021
Brief Description of Research Project	Regional hydraulic geometry curves for Vermont and surrounding portions of New England states will be updated through consideration of additional observations, and through application of advanced statistical techniques (e.g., clustering, multiple linear regression, Bayesian inference) that leverage newly-available, high-resolution LIDAR and stream geomorphic assessment data. Updated regional curves (or sets of curves) will be made publicly-available for use by transportation departments of the New England states, as well as engineers and scientists working at private firms, non-governmental organizations and state and federal agencies. Updated curves will support sizing of stream crossing structures as well as embankment design for roads and rails that share narrow valleys with rivers. Geomorphically-compatible structures will have greater resilience to extreme flood events and will support aquatic organism passage objectives.
Describe Implementation of Research Outcomes (or why not implemented)	The research is in the initial research phase and implementation of research outcomes will be reported upon completion of this phase.
Place Any Photos Here	
Impacts/Benefits of Implementation (actual, not anticipated)	This project is in its initial research phase. Impacts and benefits of the research will be reported after the implementation phase.
Web Links	N/A
<ul style="list-style-type: none"> <li>• Reports</li> <li>• Project website</li> </ul>	