



Vermont Rivers and Roads Training Program 6-Years of Progress in 2017

[A Great Change of Perspective and Actually Very Fun!](#)

Considering the River and Habitat in the Design, Construction and Maintenance of Transportation Infrastructure in Vermont

There are common themes heard from folks attending the Vermont Rivers and Roads Tier II Training Program in the first six years of the training workshops held throughout the state from 2012 to 2017. Many folks have expressed that the 2-days are very effective and informative and “actually very fun”. This link is to a fun 8 minute PBS VT Outdoors video released 3/7/17 that captures the training very well and includes participant’s comments in their words: https://www.youtube.com/watch?v=YOBMq2gYP_k

Vermont mandated the development of a Rivers and Roads Training Program in Act 138 of 2012 as an outcome of the 2011 Irene flood devastation and response in the aftermath. The state Rivers Program, Department of Fish and Wildlife and VTrans took this mandate to heart and developed the training program for three-tiered workshops on how to better achieve flood resiliency when rebuilding devastated roads, culverts and bridges.

Response of Participants

Now six years later, the comments from over 400 attendees have been unanimously positive with many folks saying this “change of mindset” comment in various ways. Each year a common theme of “*I enjoyed the excellent mix of class, river flow tables and field visits*” and that “*this was a fun 2 days*” and “*everyone should go through this training before the next flood hits Vermont.*” One great comment: “Show me and I’ll remember the river”.

Participants included 219 VTrans staff and 115 Town road crew staff who are our frontline in flood recovery and are working on rivers and roads in daily operations all year round.

Participants leave the Tier Two training with the basic knowledge and skills to distinguish between stable and unstable rivers, identify various types of river instability, understand a rivers response to alternative structural elements and designs and build those treatments for more robust repairs to our roadway infrastructure. The workshops are open forums for participants to share their experiences in the Irene recovery and other floods and discuss what did work well and what did not work well in flood disaster reconstruction efforts.

A summary review of Evaluation forms submitted by participants at the end of each training event was compiled for the 6-year period to assess the recent success and future needs of the Rivers and Roads training program. This summary shows a marked improvement in the message reaching the audience in just 6 years. More people report strong agreement that the event was a good use of their time and applicable to their job, and more people report strong agreement that the content will help them rebuild more flood resilient roads while recognizing the importance of providing for aquatic habitat.

The training program has proven to be very successful in the past 6 years in building good relationships between the River Management Engineers (RME) and the participants who will respond to the next flood. The good rapport established in the training has already improved the working relationship on the ground between the

RMEs and VTrans operations staff as proven in the aftermath of the July 28, 2014 flood in southeastern Vermont. The improved rapport expedited a great road repair project for flood recovery on Route 11 in Andover in 2014.

The participants recognize that the workshops identify the best ways to reconstruct roads, culverts and bridges to better withstand the next flood. These are skills that are also improving the everyday work the participants do along Vermont's rivers and stream. The participants can understand that flood resilient installations and repairs meet their budgets and can better stabilize those projects and that they can minimize the consequences and costs of future repairs. All participants are amazed at the number of fish found during the fish surveys in the field trips.



Classroom



River Flume Table



Field Trip

The Vermont Rivers and Roads Training Program has been developed to promote community flood resiliency because of our common "Lessons Learned" after Tropical Storm Irene hit Vermont in 2011. The training is presented in Tier One, Tier Two and Tier Three levels to reach a wide range of state, municipal and private sector transportation staff; and starting in 2017, has been offered to consultants, construction contractors, Select Boards, Conservation Commissions, foresters and loggers, etc. working with roads and flood recovery work.

Future Training Schedules

The Tier One Training will continue as an online self-guided training that creates a general awareness and understanding of the societal value of rivers, the terms and concepts of physical river processes, the importance of aquatic habitat, the implications of historical river management, and how transportation infrastructure affects and is affected by physical river processes. The Tier One information is available on the Rivers Program web page.

The Rivers and Roads Tier Two Training schedule is 2 workshops in each spring and fall for a total of 4 workshops per year. The future training schedule will be open for all entities with staff whose job duties are related to transportation infrastructure and flood recovery work. The future workshops will be scheduled around the state giving consideration for driving times to afford a broader participation by those living around the Green Mountains. The Tier Two workshop schedules will be set annually in mid-winter and distributed broadly.

The Tier Three Training continues in 2018 as a series of 4 modules addressing stream alteration practices focused on advanced engineering and construction topics in the design and construction of the stream alteration practices outlined in the 2014 *Vermont Standard River Management Principles and Practices* document. These annual Tier Three workshop schedules will also be set mid-winter each year and distributed broadly.

Questions, comments and training schedule inquiries can be directed to Todd Menees at (802) 345-3510 and/or by email sent to todd.menees@vermont.gov. The following web link will bring you to a brief general overview of the Rivers and Roads Training Program informational flyer on the Rivers Program web page where you can read more about how the program is offered to be fun and informative and see the Tier One training for yourself.

For flyer see: http://dec.vermont.gov/sites/dec/files/wsm/rivers/docs/Rivers_and_Roads_Flyer_2016-08-29.pdf